



## **Ministry of Schools, Youth and Children**

### **OECD Activity**

### **"Attracting, Developing and Retaining Effective Teachers"**

#### **STATE SUPPLEMENT FOR THE CBR GERMANY**

#### **NORTH RHINE-WESTPHALIA**

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## SUMMARY

- North Rhine-Westphalia with its 18 million inhabitants, among them almost 2 million people without German citizenship, is the by far most populated Land of the Federal Republic of Germany. GDP in 2001 was 458 billion € with sector III dominating (66%), sector II making up 26% and sector I (0.6%) almost negligible. The regional situation is rather diverging. e.g. in the county of Coesfeld, sector I makes up for 5%; in the only remaining iron and steel producing city, Duisburg, sector II is slightly bigger than average (29%), whereas the centre of chemical industry, Leverkusen, counts 54%; sector III is highest in the former federal capital, Bonn, with 83%.

The former heartland of the German heavy industry had to undergo a very hard process of change that is not yet finished. The loss of hundreds of thousands of workplaces especially in the heavy industries influence both the politics of economic and social change and the possibilities of the state to invest in education measures. But with the aid of the Federal Government und especially through funding by the European Union the economic and social structures are on the way to adapt to the needs of globalisation.

Industrialisation and the spreading of information systems have caused far reaching changes in former rural and small town lifes. The attachment to regional and confessional traditions has lost much of its vigour but remains visible in every day life and political actions, e.g. elections.

- The education system is much influenced by the restoration of the pre-1933 Prussian structures after WW II. It now consists of a 4-year common "Grundschule" (primary school), a 6-year lower secondary system with a 3-tier ("Hauptschule", "Realschule", "Gymnasium") differentiating part and a comprehensive part ("Gesamtschule"); and a 3-year upper secondary system comprising "Gymnasiale Oberstufe" at Gymnasium or Gesamtschule and the vocational "Berufskolleg" which ranges from part-time support of apprenticeship to qualification for higher education. Disabled pupils are educated in "Sonderschulen" (special schools); common education of able and disabled pupils is being extended.

- Schools in general are under public responsibility; most of them are publicly maintained. Only 7% are private run. Even if these are classified "Ersatzschulen" – schools fulfilling a special demand (religious binding, pedagogical programme etc.) not answered to by state schools - they are strongly subsidized by public funds.

- Inspection is either by local *and* state authorities or by state authorities only. A change from mere inspection to supervision has been initiated.

- Higher Education has been enormously extended during the last 30 years. There are now 11 state universities, the state German Sport University Cologne, 1 private university, 4 conservatories (ranking as universities), 3 academies (arts), 16 state polytechnics ("Fachhochschulen") - among them one federal - with 26 locations and and 9 private "Fachhochschulen" with 17 locations.

- Initial teacher training in NRW is consecutive: general studies at a university concluded with a first state exam ("Erstes Staatsexamen") followed by a practical education at schools and "Studienseminare" with the final "Zweites Staatsexamen" which gives Qualified Teacher Status. The first phase lasts three and a half years for teachers at "Grundschule", "Hauptschule" and "Realschule"; it lastes four and a half years for teachers at "Gymnasium", "Gesamtschule", "Berufskolleg" and "Sonderschule". Actual times spent in general studies tend to be much longer. The second phase lasts two years; individual shortening may be conceded (minimum duration: one year).

- Two universities test a general studies phase consisting of Bachelor and Master courses (Bielefeld and Bochum). The test started in winter semester 2002/2003 and will last until summer 2009. Positive preliminary results might lead to a state-wide adoption of the structure before the formal end of the test.

- Applications are made on the basis of internet-based offers to individual schools or to one of the five "Bezirksregierungen". Employment is made by the "Bezirksregierung" regarding the proposals of the school's commission. After several years and a final assessment teachers are life-long career civil servants or are employed without termination.
- Due to very flat hierarchies in schools there are only few career expectations apart from becoming (deputy) headmaster/mistress. Only recently the former biannual automatic increase of income (with maxima reached in the middle or late forties) has been changed into a variety of 2- to 4-year steps depending on quality of work; there are not yet any results available.
- Working conditions are rather different depending on number of lessons to be taught, number of pupils in a class, social environment of the school and especially subjects taught. There are several measures under discussion how to react on the differences, but there has not yet been made a decision on this.
- In-service continuing education is widely being transferred from offers by the central "Landesinstitut für Schule" (LfS, state institute for schools) to measures organised and implemented (with the help of "moderators" prepared by LfS-courses) within schools or locally. Much continuing education is an individual effort of teachers considering it as part of their professional life as a teacher. Preparation to take over leading functions is now being extended.
- Development of teaching personnel relies much on individual interest. There is not yet a system of development schemes. Schools already working rather independently (like the members of the group of innovative schools or the group of independent schools) show the possibilities of systematic development of their teachers as best practise .
- Employment of teachers tends to be very cyclic. Some types of school ("Grundschule", "Gymnasium") don't have many problems to find enough teachers (with the exception of mathematics and sciences) whereas others have to attract not formally qualified persons to fill their ranks ("Hauptschule", "Berufskollegs"). The aim is that all additionally recruited persons will gain qualified teacher status within a limited time (max. 4 years).
- There is no problem with mass leaving of the teaching profession before retirement. But there are considerable problems with burn out of teachers which contribute to the very high proportion of early retirement. Solutions for this problem have not yet been found.
- Empirical research on education has to be extended substantially. A programme by Deutsche Forschungsgemeinschaft, the most important body for allocation of research funds, now supports the extension of empirical research already carried out at the universities of Bielefeld, Dortmund und Duisburg-Essen.

There is much research (of international reputation also) in the fields of subject based didactics and pedagogy based on individual non-empiric work of scholars which very often cannot be supported by bigger funds.

- The need to enhance the effectiveness of the education sector is commonly agreed upon. But there are warnings not to give up the quality of institutions with medium and long term aims for the sake of short-time tax reductions.

## 1. STATE BACKGROUND

### 1.1 General lines of education policy

Education is generally accepted as being the most important resource in a country that is not rich in raw materials. It is the declared common task of all political groups and factions to allow the largest possible number of people to attain the highest possible level of education.

It is also widely accepted that the financial system of the state should be restricted to consume a smaller part of the national income. In consequence politics in the field of education is faced with aims that may be conflicting:

to secure a very high standard in education and competence in order to secure the position in world economy Germany now holds,

to secure a very high standard in education and competence as the basic to secure democracy

to optimise the efficiency of the educational system to achieve better effects at lower costs

to therefore minimise the influence of central state institutions and strengthen self-government

to change from input to output oriented policies.

### 1.2 State structures

With 18 million inhabitants North Rhine-Westphalia makes up almost a quarter of the population of the Federal Republic of Germany. The state used to be the heartland of German heavy industry during the 19<sup>th</sup> and 20<sup>th</sup> centuries based on huge resources of coal, the only important national raw material. These industries – coal mining, iron and steel producing and manufacturing – required a huge but relatively unskilled working force which was not available locally. So the area of the Ruhr (and the Rhine down from Köln [Cologne]) was the target of mass immigration from the last decade of the 18<sup>th</sup> century, having its peak at the turn of the 19<sup>th</sup> century.

At first agricultural workers and skilled workmen from the surrounding German states moved to the merging industrial region. At the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century mainly Polish speaking immigrants from the eastern parts of the Kingdom of Prussia formed the manpower for the mines and steel mills. The immigration from this part of Europe, which is now part of Poland, continued during the second decade of the 20th century. After WWII many expatriates from the eastern parts of the German Reich, but also a considerable number of displaced persons, found work and new homes in the recovering industrial region, followed by refugees from the German Democratic Republic.

When the GDR closed its frontiers step by step (in 1959 the frontiers between GDR and the adjacent states of the Federal Republic were sealed hermetically, in 1961 the last escape via West Berlin and the air corridors to Western Germany was blocked by the Berlin Wall) the gap created by the absence of workers from that region was filled by so called guest workers ("Gastarbeiter"), immigrants for a limited period of time (as was the original intention when schemes to attract workers started in 1956), first from Italy, then from Spain, Portugal, the then Yugoslavia, and Greece. The last great wave of immigrants came from Turkey; these now form the majority of immigrants who remained in Germany. There are also several other smaller groups, e.g. nurses from South Korea, asylum seekers from many parts of the world. A decisive difference to the situation in France or Great Britain is that almost none of them speaks any word of German when arriving in Germany.

The latest wave of immigrants came after the fall of the Berlin Wall and the breakdown of the Soviet system. A considerable number of them did not enter the classic industrial regions of Ruhr and Rhine but concentrated in the north-eastern part of North Rhine-Westphalia, adding a till then unknown element of self-segregation based on religion.

The newest immigrants have usually taken over the living areas left behind by the socially and economically successful former immigrants who had departed. The remaining German population, usually a minority in these regions, very often belongs to lower and largely working-class groups. Consequently, some quarters of the cities where heavy industry had been concentrated – namely the "Emscher"- area (the northern part of Ruhrgebiet) – became regions of endemic poverty, both economic and cultural.

The decline of heavy industry, beginning with the "coal crisis" in the early 1960s and much accelerated and deepened by the "steel crisis" in the 1980s, caused the loss of hundreds of thousands of work places. Despite extensive support from the governments of State, Federation, and EU the situation on the labour market continues to be very severe: many cities between Duisburg in the west and Dortmund in the east of the Ruhr area have unemployment rates of more than 15%. There is often a very substantial difference between the southern parts of the cities where middle and upper middle-class families live and the northern parts where the old housing areas of those employed in the heavy industry are concentrated. In some districts there is a potentially dangerous mixture of segregation, social weakness and long-term unemployment which also affects the schools in the vicinity: in some of these, children from German speaking families are by far in the minority, and what is more, these children have a very poor social background.

A similar structure can be found in the Cologne area which, however, resembles much more the typical European metropolitan structures with a single city centre and the west-to-east inclination of social structures.

Very different from the situation in the "Ruhrpott" (the name is also an allusion to the English "melting-pot") and the Cologne area, are the areas we find in other parts of North Rhine-Westphalia which had not undergone anything more than superficial changes to their social structure between the Thirty Years War and WWII. Even though the enormous loss of cultural heritage in the last year of WWII has widely been reconstructed the cultural and social situation has changed considerably, especially since the mid-sixties, due to industrialisation (mainly small and medium-sized enterprises), higher mobility, immigration and the impact of mass media. These areas have kept their religious diversity, although the religious coining has lost its vigour: Catholic in the north-west (Münsterland), south west (Mittelrhein, Eifel), parts of the west (Niederrhein) and in the east (Paderborn, Sauerland); Protestant in the north-east (Lippe-Detmold) and south east (Siegerland, Bergisches Land) – the patchwork-carpet of the Ancient Reich after the compromise "*cuius regio eius religio*" was founded in 1555 remains visible.

*Details of the social structure – see Appendix.*



## 2. EDUCATIONAL SYSTEM

### 2.1 Primary and Secondary Education

#### 2.1.1 History, Current Structure

North Rhine-Westphalia as a state ("*Land*") was created 1945/46 by the British Military Government out of the western provinces of the dissolved state of Prussia and the Land Lippe (as can be seen in the arms: the white horse on red ground for Westphalia, the silver ribbon of river Rhine in the green fields of the Rhineland, and the red rose of Lippe in a white field).

The education system was reconstructed after 1945 along the lines of its pre-war three-pillar-structure of lower secondary education following the basic "**Grundschule**" for all pupils (primary school – the first four of the eight-year "**Volksschule**") and according to the confessional structure of the population. Parallel to the "Volksschule" in lower secondary education there existed the "**Realschule**" (middle school) and the "**Gymnasium**"; the latter in its forms of "humanistisches Gymnasium" (grammar school based on the humanities with focus on the classic languages), and of "Realgymnasium", with focus on the more utilitarian ("real") subjects like modern languages, maths and sciences. The "Gymnasium" also formed the single type of upper secondary general education providing access to a university. For almost two decades, the size of the three pillars in lower secondary education remained the same: between 60% and 80% (urban/ rural) Volksschule, between 30% and 15% Realschule, and between 10% and less than 5% Gymnasium.

The confessional ties of the Volksschule were widely replaced by common education of both Catholic and Protestant pupils at the end of the 1960s. The Land Constitution was therefore altered by consent of the two major parties in Landtag (state parliament); as a compromise conceded to the conservative Christian Democrats the existence of the new "**Hauptschule**" (the former lower secondary part of "Volksschule") was guaranteed by the Constitution and can hence not be abolished without the consent of two thirds of Landtag members.

This proved to be a decisive obstacle when in the early 1970s, after a shift of power to the Social Democrats, these tried to replace the three-pillar-system of lower secondary schooling with a comprehensive high school ("**Gesamtschule**") - as exists in Britain, the USA and many other industrialised countries - against the will of the opposing Christian Democrats. As a result of this situation, there is a mixed system with a comprehensive branch (currently 16% of the pupils in lower secondary education) parallel to the traditional differentiating three-pillar system in lower secondary education (24% Hauptschule, 28% Realschule, 32% Gymnasium; with remarkable differences rural/ urban). The constitutional regulation also has considerable influence on the currently renewed discussion of the school system: The Christian Democrats might possibly agree to an abolition of the guaranty for the Hauptschule for the creation of a two-pillar system which would place a combination of Hauptschule and Realschule on the side of Gymnasium (like in Thuringia, Saxony).

Mention should be given to the "**Sonderschulen**", specialist schools in the support of disabled pupils (almost 5% of the pupils in primary and lower secondary education). The integration of the education of disabled and able pupils within ordinary schools is being extended after several years of trials.

Schools involved in **vocational education** are included in the tertiary sector in many nations. In Germany, they form part of secondary education (with negative effects on international comparative statistics concerning the tertiary sector of education). In North Rhine-Westphalia, the highly differentiated schools in this sector were amalgamated into the "**Berufskollegs**" in the late 1990s, which set an end to very bitter political fighting which had lasted for more than ten years. The tasks of the former independent schools are now transferred to "Bildungsgänge" (courses). Schools offering courses leading to "allgemeine Hochschulreife (Abitur - equivalent to British 'A' levels)" can be called "Wirtschaftsgymnasium" again (2003).

### 2.1.2 School owners

The overwhelming majority of schools in North Rhine-Westphalia are state run. The schools are owned by the villages and towns (which belong to a “Kreis” – county –) and cities or other communal authorities (counties, “Landschaftsverbände” – traces of the former Prussian provinces Westphalia and Rhineland –); so the local authorities have to pay for the material cost of the schools (construction and maintenance of buildings, furniture, material, bussing) and for the non-teaching staff. They are funded by per-capita financial transfers from the *Land* which collects the taxes. The teaching staff (including the headmaster/mistress who is always a teacher him/herself) is paid by the *Land*. They are either “Beamte”(civil servants) or – far less frequently – employees. The cost of the teaching force is addressed by the Landtag in a very complex system in the annual budget.

About 7% of the pupils are educated in private-run (“free”) schools. These can be quoted as “Ersatzschulen” (schools which fulfil an accepted demand not covered by public schools) or “Ergänzungsschulen” (others). “Ersatzschulen” need a social or pedagogical concept which can consist of a confessional or religious tie or a special pedagogical programme (like Waldorf-Schools). They are rather lavishly supported by the Land and/or the local authorities. Support can amount to 94% of their running cost. Teachers at “Ersatzschulen” usually have to fulfil full qualification for state schools.

“Ergänzungsschulen” only need to fulfil basic requirements to be licensed (mainly a sound financial basis). They are not supported with public funds although tax reductions may be granted (e.g. exemption from property taxes).

### 2.1.3 School inspection

The inspection of schools is organised on different lines according to the types of schools. For “Grundschule”, “Hauptschule”, and “Sonderschule” the first level of inspection is a local one (by authorities of city or county). State supervision of this inspection is on the level of “Bezirksregierung” (district authority) and finally by “Landesregierung” (state authority: Ministry of Schools, Youth, and Children).

“Realschule”, “Gesamtschule”, “Gymnasium”, and “Berufskolleg” don’t have local (municipal) inspectors. There is only state-based inspection at both departmental and state level.

The character of inspection reflects much the old “Aufsicht” principle which focuses on control. In recent years considerable change has been instigated to move from control to supervision (as the literal translation, “Aufsicht” would prove a false friend). This process will be strengthened by the programme “Selbständige Schule” (Independent Schools) which is destined to prepare a principle shift from external control by local and state authorities to internal control of schools by themselves (i.e. head).

## 2.2 Internal structure: Primary and secondary education

Compulsory education starts at the age of six (or more) when pupils go to the “Grundschule” (primary school). There are 4 grades. Pupils then change to either one school of the three-pillar differentiated system (i.e. “Hauptschule”, “Realschule”, or “Gymnasium”) or to a “Gesamtschule”, depending on the wishes of their parents. Teachers advise parents on the best choice of school but there is no obligation to follow this advice.

Lower secondary education is fully compulsory (classes 5 – 10). On completion of class 9 (and either given the promotion to class 10 when attending a “Hauptschule” or fulfilling certain equivalent requirements when attending a lower secondary class of another school type) pupils receive the “Hauptschulabschluss” which certifies the successful school attendance and is in many cases the qualification required for vocational training. On completion of class 10 (and depending on the level

of achievement pupils receive one of the following certificates which have different values for further education (in ascending order): "Hauptschulabschluss nach Klasse 10" - "Fachoberschulreife" - and if they do better than average "Fachoberschulreife mit Qualifikation" – qualified). Having attained the latter they may transfer to upper secondary education ("gymnasiale Oberstufe") at a "Gymnasium" or a "Gesamtschule" or a "Berufskolleg".

School attendance is compulsory at least until the age of 18. After completing lower secondary education pupils have to attend upper secondary education either at "Berufskolleg" which unites different types of vocational training courses (part-time as well as full-time) or at "Gymnasiale Oberstufe".

Completion of the full three-year curriculum at the "Gymnasiale Oberstufe" including the final exam ("Abitur") gives access to all institutions of higher education ("Allgemeine Hochschulreife"); but about a quarter of those achieving "Allgemeine Hochschulreife" immediately enter a (advanced) vocational training (mostly two years).

"Fachhochschulreife" - admission to polytechnics - can be achieved by attending a "Gymnasiale Oberstufe" for one year (class 11) and then transferring to a vocational training course (apprenticeship) which usually lasts three years and is accompanied by part-time attendance at a "Berufskolleg". Another possibility to achieve "Fachhochschulreife" is attending a "Gymnasiale Oberstufe" for two years (classes 11 and 12) and then take part in an one-year practical relating to the field of study they aim at.

A rather small number of pupils combine pre-academic school courses with a two-year vocational training. This combination is offered by "Berufskollegs" only. Full access to all institutions of higher education on one hand and a acknowledged vocational qualification give free choice for either starting university studies or a vocational career.

For those who did not receive any formal qualification at all or want to achieve a higher one than that received at school the *Land* and private institutions (e.g. the churches) maintain a system of 55 so-called "Weiterbildungskollegs" (colleges of further education). They offer a second chance to obtain all the lower and upper secondary qualifications mentioned. Most of the institutions of this "Zweiter Bildungsweg" (second chance education) offer both day classes and evening classes. Eight of them offer a combination of online tuition and classes in school for those pupils who wishing to achieve "Abitur". At the moment, the "Weiterbildungskollegs" are attended by about 23.500 students. A pupil's success is certified by the act of promotion to next class. For example: promotion from class 10 to class 11 (qualified) also confirms successful completion of lower secondary education and allows access to upper secondary education which in turn may allow access to higher education if completed successfully.

The length of time spent at school however is often prolonged because pupils have to (or sometimes prefer to) stay down a year to repeat single classes. Although the proportion is less than 10% , if one considers single years a rather large number of pupils have to repeat at least one class during their school career – with very different consequences: lower working-class parents tend to give up the experiment of class-climbing by education of their children whereas (upper) middle-class parents consider it to be no more than an accident – not to be taken too seriously because they know it will not affect the future career. A second repetition of a single class is excluded; in the cases of attendance at a "Realschule" or a "Gymnasium" those pupils have to leave the school and transfer to a "Hauptschule" or at least "Realschule" (if they leave "Gymnasium"). The same consequence results from a third failure to achieve promotion to the next grade – throughout the school career. Qualifications pupils have gained prior to being transferred stay valid, however.

At the "Gesamtschule" there is no class repetition – except on a voluntary basis – for years five through eight.

But one of the most relevant consequences is the exclusion from higher branches of education; pupils in the “Hauptschule” are rather well aware that most chances on the labour market which are attainable through education are no longer (or have never been) within their range.

In NRW only 7% of all pupils in lower secondary education leave the school system without any formal qualification (in comparison: 15% in Bavaria). The bulk of these pupils have attended a “Sonderschule” (Specialist school for disabled). But this also includes 12% of the pupils of “Hauptschule” and 4% of the pupils of “Gesamtschule”.

For 25% of the gross number of pupils the “Hauptschulabschluss” – the lowest level of school leaving qualifications – is the most they attain. This means that 58% of “Hauptschüler” and 29% of “Gesamtschüler” end their school career at this level.

“Fachoberschulreife” (“Fachoberschule” is an elevated full-time part of the “Berufskolleg”) is attained by 40% of the gross number; a slight majority of them stays without “Qualifikation”, so they cannot attend a “Gymnasiale Oberstufe” but either leave school for vocational training or change to one of the full-time “Bildungsgänge” (courses) of “Berufskolleg”. Only 30% of “Hauptschüler” reach this level (a slight majority without “Qualifikation”) compared with 94% of “Realschüler” (amongst them again some more without than with “Qualifikation”). Of “Gesamtschüler”, 40% leave school with this certificate (more than two thirds of them without “Qualifikation”). About 14% of the pupils of “Gymnasium” leave school with this certificate although most of these (about 19 of 20) could attend a “Gymnasiale Oberstufe”.

“Fachhochschulreife” is the qualification attained by 14% of the gross number (45% of the full-time pupils at “Berufskollegs”). They may attend a “Fachhochschule” (Polytechnic).

“Allgemeine Hochschulreife” (“Abitur” – equivalent to “A” levels) and access to all institutions of higher education is reached by 21% of the gross number – three quarters of the pupils of “Gymnasium”, a fifth of the pupils of “Gesamtschule”, and 6% of the pupils of “Berufskolleg”.

## **2.3 Higher education**

### *History, current structure*

Until the last thirty-five years of 20<sup>th</sup> century the higher education system had been marked by the principle of “Landesuniversität”, i.e. usually one university was responsible for the education of the academic personnel of a state or province. The huge number of medium and small states of which the Ancient Reich consisted gave birth to a considerable number of universities, beginning in our region with the University of Köln (Cologne) founded as fourth in the “Reich” – after Prague, Vienna and Heidelberg – by the Archbishop of Cologne, a Prince-Elector, and privileged by the Emperor (the typical construction of founding and privileging). Most of these (in the current territory of North Rhine-Westphalia, all of them) were closed in the two decades after the French revolution; some survived in the new form of state owned “Gymnasium” as grammar schools.

The main reason for closing the old universities was their very poor performance (and often very low moral standard which gave additional pretext for closing them). This, by the way, was the crucial point for the adoption of state control over the admission to universities and over their exams, which was applied to professions considered vital for public health, rule of law and the sustainability of public order – i.e. medical doctors and pharmacists, judges and civil servants, and teachers – since 1810 or 1832 respectively - until today.

In the new provinces which Prussia had gained in western Germany after the Vienna Congress in 1815 it founded a new “Landesuniversität”, in Bonn (1818, succeeding the former Brandenburg-Jülich-Kleve Landesuniversität at Duisburg). After the Humboldt reforms the universities lost their liberal arts faculty whose task was transferred to the “Gymnasium” which therefore was obliged to secure

ability for university education in the professional, so called “higher” faculties. The new faculty of philosophy, rooted in the liberal arts faculty, served for the professional education of “Gymnasium” teachers, but never really lost its old function completely, and in the same way it did not develop into a true professional faculty or graduate school. – This could be the reason why the “Magister”-studies, created in the 1970s, did not have remarkable success and are now being superseded by the adoption of Bachelor- and Master-studies and the building-up of graduate schools.

Western Germany flourished following the Industrial Revolution. The enormously increased demand for engineers led to the foundation of the Rheinisch-Westfälische Technische Hochschule at Aachen, 1870, which gained full academic status in the last years of 19<sup>th</sup> century. A new “Landesuniversität” for the Westphalian province was founded in Münster in 1902 (it had had a short-lived predecessor from 1773 to 1818).

Against strong resistance from the Kaiser and his government the citizens of Köln (Cologne) tried to found a new university to support the growing economy by the education of administrative personnel. They were only successful when the Kaiser had gone. In their own eyes they “re-founded” it in 1919; so the university, too, considers itself to date from its first foundation in 1388 and ignores the 120-year-interruption.

These four universities (plus a medical academy in Düsseldorf) stood alone until the mid 1960s. The first foundation of a new university 1965 – under a Christian Democrat government – broke with an order given by Emperor Wilhelm II who did not want “any soldiers nor students” in the working-class dominated and thus could-be revolutionary Ruhr area. The Ruhr university of Bochum is internally a traditional university. In its neighbourhood, the University of Dortmund was to serve as second technical sciences university in addition to Aachen and complementary to the more humanities oriented university of Bochum; but this cooperation did not actually work for long time. Third university in this wave of foundations was Bielefeld which – like Konstanz (Constance) in Baden-Württemberg – was destined to be a “research university”. All three were newly built as campus universities. They were lucky enough to have their foundation fall in a time of rather high public wealth. The “up-grading” of the medical academy in Düsseldorf to a full university status by adding faculties of philosophy, sciences and laws (only very recently) completed this phase of extension of the number of traditional universities.

As the education of teachers for the “Volksschule” demanded better institutions and more scientific support it was shifted from the “Pädagogische Akademien” (which in their part had succeeded the former “Lehrerseminare” shortly before the end of the “Weimar Republic”) to the new “Pädagogische Hochschulen” in 1965. They were no longer bound to the Christian confessions (though this tradition could be detected for many further years because the bulk of the personnel had not changed). Their status was raised essentially by being granted the rights of promotion to the doctorate – of pedagogy – and habilitation.

In a similar way the increasing demand for engineers and middle management personnel led to the foundation of polytechnics, “Fachhochschulen” which, however, did not gain full academic status.

In a single year, 1972, the NRW government erected five comprehensive universities (with unrestricted academic rights) by amalgamating local parts of the Pädagogische Hochschulen and Fachhochschulen, supported by scientists from other universities of the *Land* and abroad, in Duisburg, Essen, Paderborn, Siegen, and Wuppertal. Three of them could claim to revive old university traditions (Duisburg, Paderborn, and Siegen – for the neighbouring Herborn). Finally the “Fernuniversität Hagen” was founded as a comprehensive university, too, for distance learning.

But the new comprehensive universities which were also destined to back the reform of the universities’ internal structures came under heavy political pressure from outside – the “old” universities started to resist the reform plans and sometimes defamed the new concurrent; the build-up of the staff structure of the new universities had to be halted due to a massive deterioration of public finances (mainly due to the crises within the heavy industries) – and decreasing acceptance of the

reform concept inside. So the name “Gesamthochschule” was altered to a mere epitheton and finally – by a change in the “Hochschulgesetz” 2002 – completely abandoned. In another article of this act the universities of Duisburg and Essen have been dissolved and re-founded as the new University of Duisburg-Essen. In 2002, the universities of Bonn and Düsseldorf were denied the inscription of new teacher students due to their relatively bad performance in teacher education (upper secondary school teachers only).

## **2.4 Initial teacher training**

### **2.4.1 Classification of initial teacher training**

Initial teacher training in Germany has followed a line of development which makes it difficult to compare with international standards. So the basic distinction between "consecutive" and "concurrent" systems is not quite satisfying to characterise the German system.

Initial teacher training in North Rhine-Westphalia consists of two parts which are allocated to different institutions: a first phase of general studies with two or three subjects at a university, and a second phase of practical training in schools and separate teacher training institutions ("Studienseminare"). This clearly builds a *consecutive* form of initial teacher training.

But the often used qualification as "concurrent" is not completely wrong either. Two rather different reasons led to the integration of profession related elements into the university phase of initial teacher training: first, the tradition of the indeed concurrent teacher training for primary and lower secondary teachers of the pre-1960s which was not abandoned completely and even extended to the education of "Gymnasiallehrer" (teachers at 'Gymnasium' – grammar schools) which, however, always had been strictly consecutive; second the adoption of the principles of graduate or profession related studies from the university education of engineers and managers (e.g. by building "laboratories for teaching and learning"). This was supported by the fact that German universities do not have undergraduate studies (their function had been transferred to the "Gymnasium" almost exactly 170 years ago), although it could prove useful if they still had them.

Another point that makes the denomination "concurrent" more plausible is the fact that the first state exam ("Erste Staatsprüfung") at the end of the university phase of initial teacher training formally does not mean qualification for a profession, especially not for the teacher profession. This qualification is only gained by the "Zweite Staatsprüfung" (second state exam) which concludes the second, practical part of initial teacher training and thus makes for the German equivalent for Qualified Teacher Status.

But as a result, initial teacher training in North Rhine-Westphalia should be quoted as consecutive, comprising only some concurrent elements within the university phase which do not make for more than a quarter of the university studies.

### **2.4.2 Initial teacher training phase I: "Studium"**

At first initial teacher training in North Rhine-Westphalia followed the well known Prussian principles: there was a sharp distinction between the education of "Gymnasiallehrer" who were destined to take over the education of the new functional elites, both in state and society on one hand and the training of teachers for the "ordinary people" on the other. A medium position was given to the teachers of "Realschule" – just as their school played a medium role as the educating place for middle management and small entrepreneurs – who undertook a shortened version of "Gymnasiallehrer"-education or exercised additional training after being trained as "Volksschullehrer".

When after 1946 the Christian Democrats became the ruling party (with a short break until 1966) they reconstructed this distinction in principle. Like the "Volksschule" itself the training of the teachers for the "Volksschule" was divided in respect of Christian confessions; so there existed Catholic, Protestant and "simultaneous" "Pädagogische Akademien". When the troubles of the aftermath of

WWII had been overcome the "Abitur" became obligatory as general prerequisite for admission to teacher training.

An informal Great Coalition of Christian and Social Democrats abolished the confessional separation in most of the state schools and in the training of teachers. With the conversion of "Pädagogische Akademien" into "Pädagogische Hochschulen" (the plan to found Pedagogical Universities was abandoned in favour of the integration of the "Pädagogische Hochschulen" into existing universities) full academic status was reached.

The long-range aim (mainly of the Social Democrats and the unions) to unite all initial teacher education in one academic institution was achieved by the integration of some of the "Pädagogische Hochschulen" into the comprehensive universities in 1972 and of the rest of them into the traditional universities in 1981. So there were teacher education studies in all 12 NRW universities.

Due to the sharp decrease in demand for new teachers after the "Pill's Impact" on birth statistics and a continuing shortage in public finances the education of teachers for the primary and lower secondary schools was concentrated in a smaller number of universities. As a consequence some universities were restricted to the education of secondary or even only upper secondary school teachers – by no means against their will. On the other hand, the education of primary and lower secondary teachers has never been separated from the education of upper secondary teachers since then although there is strong support by the "Wissenschaftsrat" (Council of Sciences, a federal body dominated by higher education institutions) to transfer the education of primary and vocational teachers to polytechnics.

In 1975 a second vital step in the integration of the education of all teachers was taken: the new Initial Teacher Education Act ("Lehrerausbildungsgesetz") changed a basic principle. The leading idea of the teachers' education was no longer to be adapted to work at one of the different (be it from a social point of view, be it in respect of learning competence) types of schools, but to work with children at their different stages ("Stufen") of development (this could also be understood as a result of the intention to see education through the eyes of the children) without regard to the kind of school they attend.

The so-called "Stufenlehrer" training scheme referred to "Lehramt für die Primarstufe" (Qualified Teacher Status – QTS – for primary schools), "Lehramt für die Sekundarstufe I" (QTS for lower secondary schools), "Lehramt für die Sekundarstufe II" (QTS for upper secondary schools/ general education or / vocational education), "Lehramt für Sonderpädagogik" (QTS for the education of disabled children). But as it proved politically impossible to install the "Gesamtschule" (comprehensive high school) as the single type of school for lower secondary education, teacher training came into conflict with the remaining unchanged school structure and schedules of employment.

So the Initial Teacher Education Act ("Lehrerausbildungsgesetz") of 2002 which will become effective on 1 October 2003, changed the "Lehrämter" to more compatibility with the existing structure of the school system again. The new denominations of the "Lehrämter" therefore are as follows: "Lehramt für Grund-, Haupt- und Realschulen und die entsprechenden Jahrgangsstufen der Gesamtschulen", "Lehramt für Gymnasien und Gesamtschulen", "Lehramt für Berufskollegs", "Lehramt für Sonderpädagogik".

But the new regulations for initial teacher training published very recently (27.3.2003) stress the need for common elements in the training of all teachers. These common elements mainly find their place in the profession orientated parts of the university general studies whereas the second phase of initial teacher training conducted by both schools and separate institutions for practical teacher training, the "Studienseminare", is customised for the future work in the different types of school.

#### **2.4.3 Introduction of two-tier studies following the Bologna Declaration**

It was particularly the fact that an "Erste Staatsprüfung" does not qualify directly for a profession that often led to problems on the labour market both at home and abroad. The universities did not take advantage of the right they had by law to grant an academic qualification acknowledging the "Erste Staatsprüfung" as being equivalent (with only one exception – the university of Münster). Intentions to introduce teacher training studies with "Diplomlehrer" qualification (analogous to "Diplomingenieur") were abandoned for political reasons: Most of the Länder governments wanted to keep the "Staatsprüfung" to exert close control over initial teacher training; all the more as the qualification had been in use in the GDR it was thus considered politically unsuitable.

In this situation the Bologna process brought a new impetus to the discussion of initial teacher training reforms. To avoid the segregation of studies within initial teacher training from other professional studies the "Wissenschaftsrat" proposed the introduction of two-tier studies into initial teacher training. A group of experts, who on behalf of the NRW Ministry of Schools, Higher Education and Research reviewed the state's universities, strongly supported the introduction of two-tier studies into initial teacher training in February 2001. So in May 2001 the universities were invited by the then Ministry of Schools, Higher Education and Research to take part in a competition for testing the new structure. Nine out of twelve universities offered their plans; finally two were chosen: Bielefeld und Bochum. The first courses started in the winter semester of 2002/2003. The test is under the supervision of HIS (Hochschulinformationssystem) Ltd., Hannover, and will end in 2009.

The new structure consists of a three-year Bachelor Degree (of Arts or Science, depending on the subjects chosen) course with two subjects as first tier and a Master course related closely to the teaching profession as second. While the Bachelor grade - as usual - allows access to several fields of employment, admission to the "Vorbereitungsdienst", the practical phase of initial teacher education, requires a Master grade (M.A./ M.Ed.). Due to the test situation compatibility to "Erste Staatsprüfung für Lehrämter" is considered to be necessary and will be therefore maintained.

The unequal duration of the Master courses - one year for the "Lehramt für Grund-, Haupt- und Realschulen und die entsprechenden Jahrgangsstufen der Gesamtschule", two years for the others - reflects the structure of the employment system, and will be dealt with in this context.

#### **2.4.4 Initial teacher training phase 2: "Vorbereitungsdienst" (preparatory service)**

The "Vorbereitungsdienst" lasts 24 months for all "Lehrämter". It may be shortened individually if there is already experience in teaching, e.g. as a native speaker at schools abroad or trainer within an enterprise.

The "Vorbereitungsdienst" is split according to the branches of civil services. "Referendare" are trainee teachers belonging to the higher branch of civil service, and "Lehramtsanwärter" are trainee teachers belonging to the elevated branch of the civil service. The participants of the "Vorbereitungsdienst" are already regarded as in-service personnel (*stagiaire* in France) and therefore paid, but far from full wages. In their two-year training period they contribute increasingly to the lessons for the pupils (the nine hours of lessons a week they hold in the two middle semesters of the training are counted as part of the overall curriculum of their school).

"Vorbereitungsdienst" consists of work at school, supported by a mentor per subject and supervised by the headmaster/mistress, and of studies at the "Studienseminar" where experienced teachers introduce the students to teaching methods, administrative duties etc. The final "Zweite Staatsprüfung" combines a thesis and several test lessons. Assessments of conduct, efficiency etc. by members of the training school and the "Studienseminar" are included as well in the final results which play a vital role for employment. Trainee teachers often feel that they suffer a double burden which results from the insufficient cooperation between school and "Studienseminar".

In principle, all schools may contribute to the second phase of teacher training. To enable this "Studienseminare" are spread over the state to minimise distances between the two places of training. But as not all subjects can be offered everywhere (some subjects are even confined to a single



“Studienseminar” due to the very limited number of trainee teachers) and some “Studienseminare” are held at one place for a range of students (by the time being, there are 84 Studienseminare at 38 places) to take advantage of synergetic effects rather big distances between school and “Studienseminar” cannot always be avoided. This causes stress for the trainee teachers as well as impeding cooperation between the institutions.

All “Studienseminare” have been equipped with multi-media computers and further hardware (e.g. beamers) over the recent years to support training in the use of multi media facilities in teaching. Acquisition of knowledge and skills is certified by a special portfolio which could pioneer the introduction of data supplements to the “Staatsprüfung” certificates (both “Erste” and “Zweite Staatsprüfung”). So they are prepared to make use of the multi media installations now to be found in every NRW school (as well classroom installations with Internet facilities as special rooms for teaching the subject "Informatik" - information science -).

After the rather disappointing results of TIMSS and PISA the efficiency of “Vorbereitungsdienst” and – especially – the sustainability of its effects have been put in doubt and are now under evaluation.

## **2.5 Employment structure, working conditions**

### **2.5.1 Employment**

Having successfully passed the “Zweite Staatsprüfung” the now fully-qualified teachers can apply for employment, usually at the beginning of a new school year. Free places for teachers are offered by the schools individually using internet facilities provided by the ministry (a site called “LEO”). A certain number of working places are offered by the “Bezirksregierungen”, the authorities of the five districts. A smaller number of working places are offered at the beginning of the second half year, i.e. in February. Places unexpectedly becoming free may be offered without delay.

Applications for places offered by the schools are assessed by a school commission; the results of the initial teacher training being highly respected criteria. Appointments are the responsibility of the “Bezirksregierung” (district government). The teachers are usually appointed as “Beamte zur Anstellung” – a prospective career civil servant. After several years of incident-free teaching service they are promoted to “Beamte auf Lebenszeit” – and are life-long career civil servants.

Teachers may ask to change schools without leaving the service; application must be approved by the authorities and can be denied if no replacement for the position being vacated can be found. If a teacher decides to leave teaching they usually must forego the rights of “Beamte”, esp. retirement pensions. Part time work and having a break from teaching is possible for certain reasons (raising a child/ children of one’s own, or voluntarily leaving service in order to enable another teacher to take over the position for a limited number of years, or other); return into school service then is guaranteed.

New teachers usually start teaching with no reduction of the number of lessons to be taught which often causes stress until routine has been established. A lack of support from the school heads and/or more experienced colleagues is a bitter complaint made by a considerable number of the newcomers. This may lead to abandoning the new methods of teaching learned in “Vorbereitungsdienst” for the sake of “survival strategies” taken from remembering what their own teachers might have done in a critical situation. It is assumed that this structure may cause rather early mental exhaustion amongst the new teachers and add to “burn-out syndrome”. New forms of support for the first professional years (“Berufseingangsphase”) are therefore being discussed in order to keep alive the new ideas and methods of teaching the young people bring into the profession.

Teachers are allowed to have a sabbatical year after several years of service during which they only earn part-time payment for a full-time job: after three (six) years of full service at three quarters (six seventh) of the usual income they are one year off service to the same conditions. This year can be

used for recreation only but many teachers take the opportunity for continued education – mostly at their own cost.

### **2.5.2 Career**

For teachers at “Grundschule” (primary school) there are no career expectations apart from becoming headmaster/headmistress. Together with the lowest payment this might be responsible for the disinterest of male teachers to work in “Grundschulen”. In extreme cases the caretaker is the only adult male in a “Grundschule”.

Payment is the same for “Hauptschule” teachers, but up to 10% may acquire promotion. This could mean that most of them get promotion rather late in their working career on the principle of age and not for special efforts.

Teachers at the “Realschule” and the “Sonderschule” receive this additional pay from the start; there is no promotion except to the position of headmaster/headmistress and deputy.

These “Lehrämter” belong – a tradition (or relic) of the times of “higher” and “ordinary” secondary education – to the “elevated” branch of civil service (“gehobener Dienst”). The university education qualifying for these “Lehrämter” lasts three and a half years for teachers at the “Grundschule”, “Hauptschule”, “Realschule” and in the grades 5 to 10 at the “Gesamtschule”, four and a half years for teachers at the “Sonderschule”. The university education makes for a start-up top rank in the elevated branch of civil service for which university education followed by a “Vorbereitungsdienst” is not compulsory otherwise (cf. the – concurrent – “Fachhochschule” education of other members of “gehobener Dienst”).

Teachers at the “Gymnasium” (and “Gesamtschule”, too, but restricted to those mainly teaching grades 11 to 13) and for “Berufskolleg” belong to “höherer Dienst”, the higher branch of the civil service. University education for at least four years (it is four and a half years for teacher students), and a “Vorbereitungsdienst” for at least two years have always been required to enter this branch. There is one (de facto) automatic promotion step after several years of service. Depending on the availability of places which are coupled to certain functions another promotion step is reached by the majority of teachers sooner or later; special efforts may shorten the time needed.

### **2.5.3 Working conditions**

Working conditions are also different. The workload of teachers is still counted in lesson hours taught. “Grundschullehrer” have a workload of 27 lessons (of 45 min.) a week; “Hauptschullehrer” and “Realschullehrer” 27, “Sonderschullehrer” 26.5, “Gymnasiallehrer” and teachers at a “Berufskolleg” or a “Gesamtschule” 24.5.

Another factor which contributes much to the working conditions is the number of pupils in one class - which also varies. Whereas there is some indication that the number of pupils in a class does not much affect the learning performance of the pupils it is very evident that a higher number of pupils has considerable or even massive effects on the working conditions of teachers, especially in the preparation of learning materials and the correction of tests.

An essential problem for teachers of the “Hauptschule” is that this kind of lower secondary school is the only one really compulsory. Whereas the “Gymnasium” and the “Realschule” (to some extent even the “Gesamtschule”) are able to “free” themselves from pupils not fitting to their standards the “Hauptschule” has principally to take all pupils between ten and sixteen. Even more important: the “Hauptschule” is also obliged to accept pupils who do not speak any German: e.g. children of asylum seekers. Together with the social segregation mentioned above this makes work in a “Hauptschule” very demanding. The slightly lower number of the pupils in “Hauptschule” classes, compared to those of a “Realschule”, obviously does not have much compensatory effect .

There has always been a lot of criticism about this distribution of workloads. Recent research carried out in NRW has revealed that there are far more massive differences in real workload (including preparatory work, corrections etc.) depending on the subjects taught. Several alternatives to solve the problem are under discussion, but no decision has been made so far how to cope with this fact which causes considerable discontent within the school staffs.

Teachers in German schools are often referred to as “single combat fighters”. Indeed, there is far less cooperation between German teachers than between teachers in other countries. One essential reason can be seen in the fact that there is usually no school in the afternoon, and teachers leave school buildings not later than 2 p.m. to do their preparation work at home – without contacting their colleagues. Introduction of full time schools could bring more cooperation between the teachers as a windfall profit. But full time schooling had been demanded for mainly to better the social function of schools, of course, and thus formed a constitutive part of the “Gesamtschule”- programme. After it had long been fought against for political reasons (to prevent “alienation” of the children from their families or to avoid “socialist levelling”, for instance) the shocking results of PISA gave the introduction plans more impetus but they could now be hampered by lack of finances.

Most schools do not have any other supporting staff (except the school secretary and the caretaker who often work for more than one school) with the exception of “Sonderschulen” and “Berufskollegs”.

Some school centres with more than 1,200 pupils have resident social workers and/ or psychologists to help solve social or individual problems (about 250 social workers and more than 70 psychologists at “Gesamtschulen” and “Hauptschulen” are supported financially by the *Land* government although formally they are employed by the “Schulträger”, i.e. owners of the schools, usually local authorities). The government plans to give money for another 250 places for social workers to support certain “Hauptschulen” which suffer most from their social conditions. Usually the bigger cities or counties have a psychological service unit to support schools in their region; but the number is considered to be too small to be effective. Pupils sometimes have to wait several months for psychological help.

A new appeal for more supporting staff has grown following the installation of computer networks. Teachers often spend considerable time as self-made technicians keeping the computers in running order instead of using them to teach. But as this would impose additional cost to the local authorities, which have been suffering from heavy financial problems for several years, there is no other solution at hand.

## **2.6 In-service continuing education**

There is only a general requirement for teachers to take part in continuing education. As it is part of a professional understanding of being a teacher most continuing education is individual and self-imposed. The research mentioned above showed that teachers devote up to 9% of their working-time (or what they consider to be) to individual continuing education; an average of 3% would have been expected as sufficient by the researchers (economics consultants).

Participation in continuing education offered by the education authorities is restricted by the number of places available. If it is offered centrally it tends to take away time from lessons. In times of teacher shortage (see below) this has to be restricted to the minimum. So more impetus has been given to in-school continuing education mainly organised by the schools themselves and supported by “moderators” who undergo special preparation for this.

This kind of continuing education is mainly subject-related or tries to answer pedagogical problems (dealing with violence, for example). As school management is not yet a vital part of initial teacher training there has to be training-on-the-job for headmasters and other members of the leading groups. For long time this training had been given only to those already chosen for such a function. The preparation courses only recently introduced are offered by the “Landesinstitut für Schule” (State Institute for Schools) in Soest.

## 2.7 Development of personnel, and quality control

A systematic concept of personnel development has not yet been set in function. Appointment to positions relies much on personal interest shown by applicants; sometimes headmasters encourage colleagues they consider promising to apply for positions.

Especially the personnel required to support initial teacher training either in universities or in “Studienseminare” must be appointed systematically and prepared for their position. The general lack of doctorate programmes at German universities also affects teacher training: there is not enough research on teaching and/or school items; as a consequence there is not enough highly qualified personnel to man the (too few) chairs for school research or “Fachdidaktik”.

Individual quality control of the teaching force had been restricted to the time prior to the last assessment before being assigned to lifetime service. As a first step to ensure standards in teaching the comparison of student tests has been introduced. Bad results may affect the career of a teacher: The time for attaining the next “Dienstalterstufe” (wage increase according to length of employment) has been made variable from between 2 and 4 years depending on efforts shown instead of automatic promotion every second year (with a maximum in the late 40s). This may result in a loss of between €1.000 and €1.500 income every year for those who show the least initiative. The measure was introduced only a short time ago, accordingly there is not yet any information on results.

Large scale evaluations of initial teacher education or the work of experienced professionals have not yet been conducted. Up to this day only one university has had an evaluation (Paderborn, carried out by HIS) on its own initiative. When the new regulations for initial teacher training (university phase) will become valid both regular (annual) internal evaluations and external reviews at medium intervals are intended to be introduced. Similar measures will probably be taken for the second phase (“Vorbereitungsdienst”) of initial teacher training.

The planned strengthening of the autonomy of every school will encourage new methods of ensuring the standards of teaching. One measure now in discussion is the introduction of centralised tests (as they have already existed for a long time in southern Germany). They will not be confined to the end of pupil’s school career but rather take place in mid-term so that weaknesses can earlier be identified and there remains time for improvement.

The new ways of evaluation will also have to include the quality of the institutions of teacher training and continuing education on the one hand, and the schools they work in. The traditional way of input-control was by prescribing in detail what was to be taught. This will be superseded by output-orientated control. There will be more autonomy for the universities, “Studienseminare”, institutions of continuing education and especially schools, to choose their subjects and own ways of teaching. But on the other hand there will be more assessment of the results they produce.

This is to be achieved by the reduction of prescriptive frameworks and the setting of standards to be fulfilled. With the help of experts the development of both frameworks and standards is under way now; the results of their work will be edited and made available for public discussion in the near future.

### 3 ATTRACTING ADDITIONAL TEACHERS

#### 3.1 Earlier schemes for attracting additional teachers

The employment rates for teachers tend to be very cyclical. The negative effects of two world wars in one century on the population structure can still be identified even almost 60 years after the end of WWII. The very severe loss of lives of teachers in WWII, which caused a shortage immediately after the war was prolonged in the following years due to the reduction in the birth rate which had been caused by the economic crisis of the late 20s/ early 30s. The situation in NRW was worsened by a very low rate of upper secondary and therefore higher education which was the result of a restrictive access policy (school and university fees repelled children from the working class). When the baby-boomer generation entered schools in the late 50s and early 60s there were not enough teachers, although many aged teachers stayed in service for years after their official retirement.

As an emergency measure the then Christian Democrat government decided that men with advanced vocational qualifications ("Meister") and married women who had completed upper secondary education but then chosen to bring up their children were trained in two-year concurrent studies at "Pädagogische Hochschulen" to be teachers for "Grund- und Hauptschule". After the name of the responsible minister of cultural affairs, Prof. Mikat, they were nicknamed *Mi-Kätzchen* (kitties). As a next step the now (from 1966 on) governing Social Democrat government has tried to exploit the so-called "Bildungsreserve" (people considered personally able for higher education but without formal admission qualifications - who could be called in as a reserve force), i.e. the government allowed persons with lower-secondary education by way of a "special assessment for gifted people" ("Begabtensonderprüfung") access to the "Pädagogische Hochschulen".

As the numbers of ordinary students in teacher training universities and "Pädagogische Hochschulen" grew the labour market for teachers was almost saturated in the mid seventies and the "Begabtensonderprüfung" expired. In a rather short time as a result of the "Pill's Impact" on the number of births the number of free working places for teachers was dramatically reduced. As a result, during the 80s only very few young teachers entered teaching service and unemployment amongst qualified teachers rose to the same extent. This again provoked a sharp reduction in the number of teacher students. A short-lived euphoria after the German Reunification was caused by higher employment rates necessary in the western states due to the internal migration from east to west and the opening of the borders of the former Soviet Union, and led to higher numbers of teacher students. But since the second half of the 90s numbers are falling again. So there will be a decrease of qualified teachers coming out of universities and "Studienseminare" in the next years although since 2001 the interest in teacher studies is rising again when this new gap was officially announced. In figures: The number of teacher training students (beginners) reached its peak in the mid of the 70s with almost 20,000 falling to a minimum of 4,300 in 1986/87, recovering to 12,100 in 1994/95, declining to 8,500 in 2000/01 and regaining almost to 11,000 in 2001/02 (no exact figures available for 2002/03; but the trend seems to be positive). As the average number of successful graduates is around two thirds of the beginners (a rather good result for German students) at least 9,000 beginners a year are needed to fulfil the demand for teachers arising from retirement of in-service personnel (but this figure relates only to gross numbers).

#### 3.2 Principal and current reasons for attracting additional teachers

The situation is worsened by the fact that there is no efficient way of steering the choice of subjects made by the students (there are no compulsory combinations as they exist in other states and only very few exclusions). While the shortage of teachers with maths, sciences and similar subjects is dramatic there are still unemployable qualified teachers for upper secondary schools with subject combinations like German/ History, History/ Geography. So while the gross number of applying qualified teachers seems to be sufficient to succeed their older colleagues now retiring the situation varies according to type of school and/or subject.

Finding teachers for the “Grundschule” is not a problem of sufficient numbers (there is still a *numerus clausus* for beginners at the universities) but a gender problem. Less than 5% male students want to be teachers at a “Grundschule”.

There is also no problem to find enough teachers for “Gymnasium” (except for sciences in the more remote parts or heavy-industry regions of the state). For those combinations of subjects like German/History, indeed, there are often 3 and more applicants for one working place; in the vicinity of a university even more.

Finding enough teachers for “Hauptschule” is a big problem no matter which subjects they combine. In February 2003 almost 50% of contracts were made with persons not having the original qualified teacher status, i.e. “Zweites Staatsexamen”.

Though income is much better in the “Berufskollegs”, there is a permanent shortage of teachers there, too. The reason is that private business has detected that teachers at “Berufskolleg” are very well suited for its own demands and lures them away with far better payment. The actual crisis especially in the house building sector, in contrary, makes many architects and building engineers look for a safer haven in civil service but unfortunately the crisis also affects the number of pupils in the classes for brick laying, carpentry and other vocations connected with the building sector. This is a cardinal problem which does not occur at the schools in general education. When the economy is prospering, there is more demand for teachers in vocational schools, but fewer teachers – and when economy is down, there is less demand for teachers, but more people are willing to serve as teachers. As changes tend to be very quick but the education of teachers is rather slow there is always a problem to adjust the supply of teachers to the actual demand.

The situation is not expected to change over the next years in principle. The large numbers of teachers employed in the 60s and 70s are due to retire, thus making space for newly employed; but there will not be enough qualified teachers applying.

Consequently the ministry responsible for schools (and teacher education) started a series of programmes to attract qualified teachers from applicants with “wrong” subject combinations, and people with university education and several years experience in (preferably) IT-jobs, plus graduates from “Diploma-“ or “Magister-“ studies with at least one subject taught at schools, and graduates from “Fachhochschulen”. To keep quality high they all have to pass the “Zweites Staatsexamen”; graduates from “Fachhochschulen” have to do additional studies at a university in another subject to reach a “Erstes Staatsexamen” before they can prepare for “Zweites Staatsexamen”.

These so-called “Seiteneinsteiger” (coming-in by the side door) receive almost full payment, whereas the contracts are limited in time so that persons not suited to teaching can be filtered out. The adoption of Master courses designed for qualifying for the access to “Vorbereitungsdienst” could create another possibility to attract additional teachers in future.

#### **4. RETAINING EFFECTIVE TEACHERS**

Only very few teachers leave the teaching profession before retirement. There is no problem with mass leaving the service after only few years of professional work. This is also an effect of the steadily increasing incomes of the teachers. Raising unemployment outside the public sector of the working place market is an additional deterrent against tendencies to leave teaching.

But there exist two problems:

- staying in-service as a mere physical person ("going into inner exile") without real interest in teaching or even openly showing disgust
- early retirement for health reasons.

These effects are often referred to as "burn-out syndrome". This is often connected with a feeling like being left alone against a world of enemies - pupils, parents and colleagues.

There have been created several measures to minimise burn-out, especially within in-service continuing education or by rather freely given recreation times ("Kuren"). But obviously there is needed a real change to personal development methods in schools many heads do not know to use.

As a remedial against early retirement a extension of part time work without loss of income has been proposed but the financial situation of the state makes adoption of measures like this not very probable.

The German version of the superscript to this chapter would rather be (instead of "retaining effective teachers") : "Keeping teachers effective".

#### **5. RESEARCH & DEVELOPMENT**

Policy-making in the field of attracting, training and developing a qualified teaching force is made considerably difficult by the lack of empirical evidence. If the paradigmatic change from input to output orientation is to be made effective reliable empirical research is needed. Neither NRW universities nor the Landesinstitut für Schule (State Institute for Schools) at this time possess sufficient research capacity – both qualitative and quantitative. With the help of the "Deutsche Forschungsgemeinschaft" (the most important distributing body for public research support) effective research capacity is being built up to support the existing research units at the universities of Bielefeld, Dortmund and Duisburg/Essen .

Considerable (and also internationally recognised) research in "Fachdidaktik" (teaching methodology) and Pedagogy is made by individual scholars despite rather limited resources in manpower and/or financial aid.

The main problem is, however, that funding of research in the fields of pedagogy, school and education systems, teaching methods, education policy etc. is almost completely restricted to state efforts. There is no tradition of private funding in this field except in a very low ratio. The general political tendency to restrict state expenses does not relieve the education sector of this pressure. As a positive effect this may strengthen the efforts to increase efficiency within the education sector. But there have to be precautions to avoid sacrificing long term aims in education to short term interests in tax reduction.

#### **6. INFORMATION FACILITIES VIA INTERNET**

Besides a very wide range of printed information material provided by both the Ministry of Schools, Youth and Education (MSJK) and the *Land* Institute for Schools (LfS) these institutions also offer already very intensely used internet facilities. They address as well teachers and pupils, parents, journalists, politicians and others interested in the field of education. The domains are:

- [www.bildungsportal.nrw.de](http://www.bildungsportal.nrw.de) (by MSJK)
- [www.learn-line.nrw.de](http://www.learn-line.nrw.de) (by LfS).

More informations esp. about teacher training studies are available via the homepages of the universities using the scheme

- [www.uni-<Name of city where the university is>.de](http://www.uni-<Name of city where the university is>.de)  
and looking for "Zentrum für Lehrerbildung" (centre for teacher education) and/or "Studium". Most universities provide an English version of their homepage also.