

# The Recognition of German *Fachhochschulen* Degrees Abroad with Reference to Developing Countries\*

D. PAULUS

Carl-Duisberg Gesellschaft e.v. Hohenstauffering 30-32, 5000 Köln 1, Federal Republic of Germany

*The Fachhochschule is a newcomer among the institutions of tertiary education in Germany: it was founded in 1970-1. According to the German higher education bill, the Fachhochschule offers academic studies in various courses of study with the aim of application-orientation. Within Germany Fachhochschule has built up a good reputation and its graduates have excellent chances on the labour market. The Fachhochschule degree is put on a par with university degrees by law. More than 16,000 foreign students studied at Fachhochschulen in 1990. Many of these have the problem of recognition of their degree when they return to their own country after their studies. Formal non-recognition may have many reasons: the argument mostly put forward is the lack of information about the Fachhochschule; the reasons behind many actions to deny recognition may well be the protection of the local labour market against competition from new (ar-)rivals. Fachhochschule degree holders from developing countries have several possibilities to improve their situation when facing the problem of recognition in their own country. But even without formal recognition they find good opportunities for work in most countries due to the thorough theoretical and practical knowledge imparted by German Fachhochschulen.*

## FOREIGN STUDENTS AT GERMAN *FACHHOCHSCHULEN*†

MORE than 90,000 foreigners were studying at universities and tertiary-level institutions in Germany in 1990. This number includes 16,000 foreign students at *Fachhochschulen*. The number of foreign students at *Fachhochschulen* in the Federal Republic of Germany has increased continuously during the last 15 years. When stating the number of 16,000 it has to be considered that more than half of these students come from Iran, Turkey, Indonesia and Greece and that a substantial percentage of these are called *Bildungsinländer*, meaning that the families of these students live in Germany and that the students have finished secondary school in Germany.

So far there has been no systematic investigation as to the motivation of these foreigners for taking up their studies at *Fachhochschulen* in Germany. In general two reasons can be assumed: those foreign students at *Fachhochschulen* coming from neighbouring European countries intend to avoid access restrictions to universities in their own countries, or choose subjects that cannot be studied at home, or prefer the German *Fachhochschulen* because it is nearer to their home than their national university. Students from developing

countries very often opt to study in Germany because they were not admitted to their national university, sometimes belong to ethnic or religious marginal groups, and because they were attracted by the high reputation of German universities and *Fachhochschulen*. A certain influence can also be ascribed to the fact that German universities and *Fachhochschulen* do not charge fees. Preference is given to the *Fachhochschule* as it is judged to be less complicated and less time-consuming than university. Students from developing countries founded their decision for *Fachhochschule* quite often on the practical orientation of the studies and apparently this argument gains in weight during the studies.

German authorities consider studies at *Fachhochschulen* as being especially suitable for students from developing countries. This view is based on the aim of studies at *Fachhochschulen* and on the intensive guidance of the students during their studies. Delegations of foreign experts who have visited *Fachhochschulen* in the Federal Republic of Germany, recommend the *Fachhochschule* model for the expansion of tertiary education in developing countries. This has already been tried out in Burundi, China and Thailand. Furthermore, it has been recommended from many sides, including the *Fachhochschulen* themselves, to recruit more students for *Fachhochschulen* from developing countries—at least more than there are at present. There are some solid arguments for this recommendation.

On the other hand students from developing

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† See also The Education System in the Federal Republic of Germany, by E. Wiebe, *Int. J. Appl. Engng. Ed.*, 3, 93, 1987.

countries at *Fachhochschulen* experience some problems. Especially significant are the following:

- Studies at German *Fachhochschulen* are not predominantly adapted to conditions in developing countries.
- Alienation of the student from his home country.
- Problems of reintegration when returning home (professional problems and non-professional).
- Problems concerning the recognition of the *Fachhochschule* degree.

From the point of the foreign student the problem of recognition or non-recognition is particularly important. The problems related to recognition explained in this paper on the one hand give the students a detailed view of the situation and hints on how to tackle the problems. It also gives an introduction to the matter for all interested. All statements made in this paper refer essentially to degrees in engineering (*Diplom Ingenieur*). The majority of students at *Fachhochschulen* originating from developing countries take their degree in engineering.

The Carl Duisberg Gesellschaft has completed comprehensive information referring to recognition of *Fachhochschule* degrees in connection with the implementation of the *Fachhochschule* scholarship programme entrusted to the Carl Duisberg Gesellschaft by the German government. Employees of the Carl Duisberg Gesellschaft have built up experience out of personal contacts with former scholarship holders on the occasion of follow-up seminars in many developing countries. This experience is reported here.

#### THE SITUATION OF FOREIGN FACHHOCHSCHULE DEGREE HOLDERS AFTER THEIR RETURN TO A DEVELOPING COUNTRY

For only a minority of *Fachhochschule* degree holders who return home after a successful course of studies in Germany do the problems appear negligible: those who were supported by the government (who received a scholarship) and who were guaranteed a working place; those who were financed by their own family and who will work in the family enterprise; or those who are sent by a German firm to its branch abroad or its affiliated company. For these degree holders the problem of adequate evaluation and recognition of their degree is resolved.

The situation is different for those who get no support when they return home and have to strive for recognition and for a job. In the course of 15 years the Carl Duisberg Gesellschaft has had intensive talks with around 2,000 scholarship holder after their graduation and before they returned home, as well as with about 500 ex-scholarship holders after their return home and after some years of work experience. These talks have resulted in the following situation of the graduates,

which can probably be assumed to be representative of the majority of *Fachhochschule* graduates from developing countries.

#### *Concerns of Fachhochschule graduates*

*Fachhochschule* graduates are more or less afraid of the following:

- In spite of having passed their examinations successfully, they do not feel themselves to be fully fledged professionals. They fear that they cannot put into practice what they have learned during their studies—especially in view of the high expectations that people from developing countries have to face when they have studied in Germany. They are not fully in command of the technical language of their profession, as they studied in German. Now they are expected to present their knowledge in the official language of their country.
- They have to compete with those who have completed a more traditional course of study in their own country, in the UK, the USA or France. Those mostly have a stronger support in the economy and in the administration than those people who have studied in Germany.
- They have to come up to the high expectations of their family.
- They have to readapt to the way of life of their country.
- They have to strive for the recognition of their *Fachhochschule* degree and for a job. Very often they do not know the procedure of recognition, and have little idea of the difficulties lying ahead.

#### *Overcoming the problem*

In most cases *Fachhochschule* graduates master the expected problems better than previously assumed. This statement needs qualification. The problems of reintegration are too complex and the number of persons interviewed is too small. Nevertheless the interviews with more than 500 ex-scholarship holders *Fachhochschule* graduates, made over a period of about 17 years, have produced the following results with notable consistency:

- Successful studies in Germany, above all when followed by a period of professional experience in German industry, offer a good chance for work in the home country—when the labour market is not disturbed. If the labour market is disturbed due to a disrupted economy, those who have studied abroad more readily tend to look for work in other countries.
- A high percentage of *Fachhochschule* graduates report that they are in a position to solve the professional problems of their work. The application-oriented study courses of the *Fachhochschule* contribute to the high performance. *Fachhochschule* graduates are able to give practical guidance to their employees; they can even show them how to do the work. According to their own judgement they are better prepared

for their profession than professionals who have studied in their own country.

- The non-professional problems of reintegration are mostly judged as being of less importance than previously assumed.
- The problems of formal recognition of the *Fachhochschule* degree in the home country are very often less serious than expected before returning home. One reason for this is that developing countries are generally still lacking experts with highly specialized knowledge. Another reason is that the Federal Republic of Germany has a high reputation as far as its educational system is concerned. One serious drawback for *Fachhochschule* graduates is the difficulty of explaining the still widely unknown *Fachhochschule* to potential employers in developing countries, especially as there is no equivalent of this institution in other countries. The situation improves as soon as the graduates are allowed to put their knowledge into practice. In this context, work experience first gained in Germany can turn out to be a valuable asset.
- *Fachhochschule* graduates have reported that a certificate giving proof of working as an engineer in a German industrial enterprise assured potential employers in their own country that the candidate was a competent professional.

Nevertheless the problems of recognition of the *Fachhochschule* degree in developing countries should not be underestimated. Even when all graduates who were interviewed by the Carl Duisberg Gesellschaft years after their return home, state that they have found an employment adequate to their training, this does not mean that the individual faces no difficulties when applying for a job. The problems are different in every country. In view of the large number of countries concerned, the problems will have to be grouped into categories. The presentation of the specific problems in every single country will have to be reserved for another publication.

#### PROBLEMS OF INTERNATIONAL RECOGNITION OF THE FACHHOCHSCHULE DEGREE: DEVELOPING COUNTRIES

##### *Different educational systems in developing countries*

The difficulties arising from a comparison of educational systems of different countries have been clearly demonstrated during the negotiations on the recognition of academic degrees between the countries of the European Community. Developing countries face even more serious problems when evaluating foreign academic degrees. Departments of the ministries of education entrusted with the task of evaluating foreign degrees very often have to pass judgement on certificates and documents from 30 to 40 different countries. This task has to be performed with limited personnel.

Hardly any educational systems are directly comparable. As an example, for engineering education the minimum study time varies from three to five years in various countries. Furthermore the contents of courses show marked differences in different countries. An area of great dispute is the value attached to integrating practical training in industry into the courses. Experts ridicule attempts to compare the different national education systems by putting side by side the contents of courses, study time and combination of subjects of different courses of study. There is a constant development of course content. This increases the difficulties of comparison. As a way out of the dilemma the concept of the Euro-engineer was developed within the EC. This concept assumes that all national education systems are capable of meeting their own needs for qualified, competent engineers. The Euro-engineer will have authorization, according to EC regulations, to take up work in all member countries of the EC on condition that he or she has gained professional experience through on-the-job training and has worked in the profession for a determined number of years [1]. This newly conceived approach may mark the way for a revision of the assessment of professional qualifications in developing countries.

##### *The Fachhochschule—the unknown institution*

Up to now it has not been possible to draw a clear picture of the German *Fachhochschule* and to transmit it to people outside Germany. This should not be too much of a surprise as the *Fachhochschule*, which was founded only in 1971, is rather 'young' compared to the other institutions of tertiary education in Germany. The majority of developing countries have hardly any experience with graduates from the *Fachhochschule* as on average there are only a few graduates in those countries. When assessing their qualifications, members of the relevant national commissions in developing countries tend to rely on information on *Fachhochschule* from Germany and from European international bodies [2]. This information is incomplete, inadequate and controversial; it depends on the individual interests of the institution or person delivering it. In most cases the information is at least not adjusted to the needs of equivalence experts in developing countries.

The difficulties start with the name *Fachhochschule*, which cannot easily be translated into foreign languages: in German *Hochschule* and *Universität* are synonymous. This does not find an exact correspondence in other languages (the English translation of *Hochschule* into 'college' or 'polytechnic' in addition to 'university' shows the possible variation). *Fachhochschule* causes even more confusion. In German this prefix characterizes the applied nature of the *Fachhochschule*. There is no adequate translation into other languages. The attempts to translate the 'Fach' by 'professional' in English is misleading: it obscures

the character of the *Fachhochschule* as an academic institution.

Four characteristics of the *Fachhochschule* generate uncertainties as far as the formal equality of *Fachhochschule* and *Universität* is concerned as postulated by the General Law for Hochschulen:

- The admission requirement, *Fachhochschulreife*, which is attained after 12 years of primary and secondary school. It differs from the *Abitur*, which is required by the German universities and which is attained after 13 years of primary and secondary school. This difference is falsely interpreted as an indication of the lower status of *Fachhochschule* compared to *Universität*.

The regulations for students changing from *Fachhochschule* to *Universität* might point in the same direction.

- The minimum study time of three years which is required by the education ministries of the German federal states. On this count it is easily forgotten that in these three years the students have 3,300 hours of lectures, which is hardly less than other academic institutions offer in four years of study.
- The applied nature of the studies at the *Fachhochschule* leads to a conflict. It is valued as a positive characteristic for the transfer of scientific knowledge into professional work. It is valued negatively because pure science confers a higher reputation on the academic status of an institution (especially for the élites in developing countries, who in most cases have studied at 'traditional' universities). In this respect the *Fachhochschule* receive a low rating for academic quality.

The élites in developing countries give a rather low rating to practical skills for people on middle or higher management levels—a heritage of the colonial past. Practical training as part of academic studies is not regarded as being of the same value as the theoretical or scientific part. There is a tendency to compare the German *Fachhochschule* degree with technician training in their own country.

The title *Diplom-Ingenieur* of the *Fachhochschule* leads deceptively into the semantic neighbourhood of the 'Higher National Diploma', which the Germans compare with their technicians' certificate, which is very clearly a lower level than *Fachhochschule*.

In the past the *Fachhochschule* offered no possibility for a doctorate. This fact generated doubts as to the academic status of the degrees conferred by the *Fachhochschule*. This situation changed in 1991 when federal laws were passed allowing German universities to accept outstanding graduates from *Fachhochschule* as candidates for a doctorate. In February 1992 the federal states of Berlin and Saarland had taken this law into their own legislation; the other federal states will have to follow.

Grist to the mills of foreign critics of the *Fach-*

*hochschule* are the differences in the salary of university and *Fachhochschule* graduates in the German civil service as well as in industry. Whereas these differences balance out in industry with growing work experience, they do not in the public sector. In industry it is said that the differences in salary are due to the potentially higher career development prospects of university graduates. This statement strengthens the argument of foreigners that the university has, after all, more beef than the *Fachhochschule*.

The information material offered by the *Fachhochschule* themselves is geared only to the needs of applicants for studies [3]. Foreign experts in search of material which helps to define the equivalence of degrees easily come to the conclusion that their task is comparable to putting together a new puzzle out of several old ones.

#### *Different procedures for recognition*

In Germany the *Fachhochschule* graduates become professional engineers when they graduate. There are only a few professions (e.g. architects and marine engineers) where work experience is a further requirement in addition to the academic degree.

In general, the final certificate of engineering studies is the ticket for entering professional life. Foreigners in Germany who want to take up a profession that requires an academic qualification have to prove that they have an academic degree comparable to the required German university degree. The foreign degree has to be recognized by the Central Office for Foreign Educational Qualifications (a department of the Standing Conference of the Education Ministries of the German Federal States). In other countries the procedure is similar. Nationals of African countries who have studied abroad as a rule have to apply for recognition of their foreign degree to a government institution (in many cases a subdivision of their ministry of education) before they are allowed to compete with graduates of local universities for jobs in the civil service or private industry. In Latin America recognition ('revalidación') is within the jurisdiction of the national universities.

In this race for official recognition the *Fachhochschule* graduates may take second place. The people who deal with recognition, if they have an academic degree at all, have studied in their own country or in the United Kingdom, France, or the United States. They tend to a more favourable assessment of those educational institutions that are better known to them. The above-mentioned lack of information on *Fachhochschule* aggravates the problem.

Consequently, *Fachhochschule* graduates in general have above-average difficulties with the adequate recognition of their degree.

A stimulus for an adequate recognition of academic degrees in general has been the offer of scholarships for studies abroad to developing countries. It is easily understood that the offer of

scholarships for costly studies in industrialized countries pays only when the graduates from those scholarship programmes get the chance to work in positions corresponding to their educational level attained during those studies. In the context of granting scholarships, the German government has succeeded in obtaining recognition of the German *Fachhochschule* degree at an adequate level in many developing countries. At present recognition at a more or less adequate level has been attained in 46 Third World countries.

Another possibility is offered by inter-government agreements. Such an agreement may present the difficulty that the foreign government insists on a mutual recognition of academic degrees. During these negotiations it very often turns out to be impossible to come to an understanding with the other party on the evaluation of their academic degrees.

In many developing countries a professional engineer has to be registered with a (mostly privately organized) professional body, e.g. an engineering society or engineering council.

These professional bodies make their own evaluation of the academic qualification of their applicants for membership. Their criteria may differ from those of the government. Experience has shown that one leading motive of those professional bodies is to reduce the pressure on the labour market or in plain terms, to restrict newcomers in order to secure the good position of established graduates. This may be one explanation why certain professional associations are reluctant to recognize the *Fachhochschulen* degree.

The tension is slightly relieved by the fact that in developing countries recognition of an academic degree by the government and/or by a professional body is not always necessary in order to work in the profession. In fact the lack of qualified personnel is so great in these countries that *Fachhochschule* graduates have chances for work—even if official recognition cannot be obtained.

#### *The present situation of recognition of the Fachhochschule degree in developing countries*

The Carl Duisberg Gesellschaft has systematically collected data referring to the recognition of *Fachhochschule* degrees in developing countries.

The Carl Duisberg Gesellschaft is a private organization which carries out programmes of further training for nationals from developing countries on behalf of the German Government. One of these training programmes is the *Fachhochschule* scholarship programme, which serves to train young people from the Third World to be engineers via studies at German *Fachhochschule*. In connection with this work, the Carl Duisberg Gesellschaft decided in 1972 to provide a thoroughgoing documentation on the recognition of German *Fachhochschule* degrees in developing countries. Since then all information has been regularly compiled and published in the book *Einstufung und Anerkennung des Diplom-Ingenieurs FH in Entwicklungsländern* (Carl Duisberg Gesellschaft e. V. Köln, 1987) [4]. The publication discusses recognition (e.g. by the government and the professional body or by the government only) in 46 Third World countries. In many developing countries the problem has not yet materialized because no nationals of these countries have as yet obtained their degree at *Fachhochschule*. The question of recognition is on the agenda of the negotiations on cultural agreements between the Federal Republic of Germany and all foreign countries. On the other hand it is not planned to promote further the recognition of the *Fachhochschule* degree in developing countries by granting *Fachhochschule* scholarships.

The Carl Duisberg Gesellschaft has produced information material on *Fachhochschule* on behalf of the German Government. This material can be used for promoting the recognition of the *Fachhochschule* degree and consists essentially of a detailed description of the institutions and the courses of study, plus a short brochure summing up the contents of the former [5].

#### ACTIVITIES FOR THE PROMOTION OF THE INTERNATIONAL RECOGNITION OF THE *FACHHOCHSCHULE*

The mutual recognition of academic degrees within the European Community will pave the way for recognition of the *Fachhochschule* degree in developing countries. As the problem has been solved in Europe, some sort of breakthrough may be expected in a number of developing countries. But will this really be the light at the end of the tunnel? Even if one is not inclined to believe the cynicism of Murphy's Law ('the light at the end of the tunnel is an oncoming train') one should not be too optimistic. Many Third World countries insist on their own methods concerning recognition and do not automatically follow European decisions.

As *Fachhochschule* students from developing countries to a large extent choose technical/engineering courses, the evolution of the recognition of engineering qualification within Europe will be briefly discussed.

Within the European Community the mutual recognition of engineering degrees has been on the agenda of countless negotiations for more than 18 years. In the past it was regarded as being absolutely inevitable to compare painstakingly the minimum study time and contents of courses of engineering studies in the various member countries of the European Community. As each European country has its individual educational system, developed over centuries and still developing continually, it has proved extremely difficult to come to terms regarding the equivalence of the academic degrees.

It took 17 years to come to an agreement on the recognition of architects within Europe, including architects graduated from *Fachhochschulen*. The lengthy duration of these negotiations generated

interest in finding an easier and more effective method to assess the qualifications of engineers from different European countries.

The European Federation of National Engineering Association (FEANI) has made a proposition which might provide a way out of the dilemma.

The FEANI proposition of the European Engineer is based on the assumption that the national educational systems in Europe have as an end product an engineer who is capable of fulfilling the requirements of the engineering profession. It is further assumed that slight inequalities caused by different formation routes will be levelled out by a number of years of professional experience. Thus, an engineer, having graduated at a university or comparable institution and with 3 to 4 years on-the-job training plus professional responsibility (academic studies plus training and professional experience have to total 7 years) is regarded as being adequately qualified for professional work in all European countries. The European Council of Ministers of Economics has adopted this concept and it has been ratified by the European Parliament. As soon as the concept of the European Engineer has become standard law, the governments of a number of developing countries will have to reconsider their point of view, which has been influenced negatively by the fact that even in the European Community the status of the *Fachhochschule* was under dispute.

#### **PRACTICAL HINTS REFERRING TO THE RECOGNITION OF *FACHHOCHSCHULE* DEGREES FOR APPLICANTS TO THE *FACHHOCHSCHULE* IN THE FEDERAL REPUBLIC OF GERMANY**

Foreigners are recommended to gather information referring to the recognition of *Fachhochschule* degrees in their own country before they leave. They are advised to consult, for example, the Equivalence Board of the Ministry of Education and the Professional Engineers Board.

Some *Fachhochschulen* in the Federal Republic of Germany co-operate with institutions of tertiary education in the United Kingdom and France and confer two degrees after combined studies in the Federal Republic of Germany and in the United Kingdom or France, e.g. the 'Diplom Ingenieur' plus the Bachelor of Engineering from a British Institution [6].

A number of institutions of tertiary education in the United Kingdom, France and the United States have successfully admitted *Fachhochschule* graduates for further studies leading to *Maîtrise*/M.Sc. These institutions equate the *Fachhochschule* degree with the Licence and B.Sc. respectively.

Foreign *Fachhochschule* graduates report that industrial enterprises in their home country have shown increasing interest in offering a job, provided that the graduate had gained some professional experience in Germany after academic studies.

The Central Office for Educational Qualifications of the Secretariat of the Standing Conference of Ministers of Education and Cultural Affairs of the Laender in the Federal Republic of Germany (Nassestrasse 8, D-5300 Bonn 1) issues on demand a 'To whom it may concern' in different languages. In this certificate the *Fachhochschule* degree is explained and an indication is given for the equivalence to an academic degree conferred in the home country of the person concerned, or alternatively to an academic degree in the United Kingdom, France and Spain. This certificate is issued free of charge on receipt of a curriculum vitae, copy of secondary school certificates and a copy of the graduation certificate.

*Fachhochschule* engineering graduates with some years of professional experience may apply for the FEANI passport certifying the qualification European Engineer. FEANI has an international reputation so that such a document may indicate the qualifications of the holder to a potential employer. Application forms are obtainable from: Deutscher Verband technisch-wissenschaftlicher Vereine (DVT), Graf-Recke-Strasse, D-4000 Düsseldorf.

#### **CONCLUSIONS**

A total of 16,000 nationals from developing countries study at *Fachhochschulen* in the Federal Republic of Germany. Many of these face problems of formal recognition of their *Fachhochschule* degree when they return home. The German Government has contributed to formal recognition in 46 Third World countries, but progress is slow in other countries. One serious obstacle is that the *Fachhochschule* is a unique German invention. It is difficult to compare the *Fachhochschule* to foreign institutions—there is no exact counterpart abroad. Furthermore, as a relatively new institution of tertiary education (it was founded in 1970/1) it is not widely known outside of Germany.

Nationals of developing countries who think of studying at a *Fachhochschule* are well advised to consider the question of recognition before they can take up their studies. There are several possibilities to improve chances on the labour market in the home country of foreign students. The breakthrough might be the recognition of academic degrees within the EC countries, which has become standard law recently.

### REFERENCES

1. For details see FEANI publications. Obtainable in the United Kingdom via The Engineering Council, 10 Maltravers Street, London WC2R 3ER.
2. See e.g. *World Guide to Higher Education*, Bowker, UNIPUB, Unesco Press, 1982, p. 104.
3. The main source for information are *Studienführer* (student guide books) published by the *Fachhochschulen* twice yearly.
4. The book, whose title may be translated *Assessment and Recognition of the Engineering Degree 'Diplom-Ingenieur FH' in Developing Countries*, has been produced for use in the Carl Duisberg Gesellschaft only and is available for general use in exceptional cases only.
5. The material in question consists essentially of (i) the text of *Fachhochschulen in the Federal Republic of Germany* (Nomos Verlagsgesellschaft, Baden-Baden, 1989) and (ii) the brochure *Fachhochschulen in the Federal Republic of Germany—Twelve Answers to Twelve Questions*.
6. For example the *Fachhochschule* of Hamburg cooperates with several institutions in the United Kingdom and the United States. Further information may be obtained from Professor Wald, Fachhochschule Hamburg, Berliner Tor 21, 2000 Hamburg, Germany.