

This publication
presents the action plan
Better Education
- launched by
the Danish Government.

The action plan should
strengthen the proficiency
and competence level in
upper secondary education,
in higher education and
in adult and further
education and in
continuing training.

Better Education




Action Plan

The Danish Government
June 2002

Better Education Action Plan

**The Danish Government
June 2002**

Ministry of Education
Ministry of Science, Technology and Innovation
Ministry of Culture
Ministry of Economic and Business Affairs
Ministry of Refugee, Immigration and Integration Affairs
Ministry of Interior and Health
Ministry of Employment



**Better Education
Action Plan**

1st. edition, September 2002

ISBN 87-603-2240-3

URL: pub.uvm.dk/2002/better1

Published by the Danish Ministry of Education
as an online publication

Cover design: Malchow A/S

Layout text: Malchow A/S

Published in Denmark 2002

Better Education - a brief introduction - is
available online and can be downloaded from:
pub.uvm.dk/2002/better2 .

It can also be ordered in a printed edition
- as long as stocks are available - at
The Danish Ministry of Education

E-mail: forlag@uvm.dk

Fax no. +45 3392 5219

Order no. UVM 0113

Ordering Fee: DKr. 40

F O R E W O R D

The Danish government wishes to encourage new growth and dynamics in society for the benefit of all. Welfare in Denmark must be ensured and expanded.

Therefore, our courses of education must be of top quality. In the future, education of a high international standard and quality will be the key to coping well in a more and more globalised world. Education is one of our most important competition parameters and a prerequisite for an increasing and well-qualified workforce with up-to-date skills.

The education sector must be based on the freedom of choice: human beings must come before the system.

However, high professional standards, quality, relevance and flexibility for all the users of the education system are not a matter of course. They require a continuous adaptation to new requirements, and improvements in areas where everything is not as it should be. There is a need for innovation.

The government is therefore presenting its action plan for *Better Education* in order to strengthen the proficiency and competence level in upper secondary education; in higher education; in adult and further education and continuing training. The action plan must be seen in close connection with the aims of the Folkeskole and with the government's other initiatives, including the growth strategy *Determined Growth*.

In the coming months and years, the government will launch a number of major reforms, in particular in the Gymnasium, the HF and the university areas. Within vocational education and training, there will be innovation of the commercial and technical programmes. In the adult education and in the further education and continuing training areas, there will among other things be a further development of the continuing training provision, and its connection with the vocational education and training area is to be strengthened. New vocationally-oriented adult education programmes are to be launched. The government will furthermore launch some major cross-cutting initiatives, among others in relation to improved educational and vocational guidance; a strengthening of the natural sciences throughout the entire education system; and an improved educational achievement in the different subjects by means of IT. Finally, the international element must be strengthened in all courses of education.

The government has great expectations when it comes to this wide range of reforms and initiatives. It is the aim to create challenges for all in our education system, also for the most gifted - for the benefit of all citizens in Denmark.

The Government
June 2002

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CHAPTER 1

The Danish Government's vision of Better Education



- A well-functioning education system of high quality is a basic prerequisite if we are to ensure growth and welfare both for the individual and for the Danish society as a whole.

The Danish Government has a vision of a flexible education system with the offer of education and training courses at a high proficiency and competence level. The courses of education and training must be relevant and meet the business sector's and the public sector's qualification needs. Furthermore, the education and training courses must meet the requirements of the individual pupil or student - also of the most gifted.

It is the target that Danish education and training must match the best in the world, also when evaluation and benchmarking are carried out cross-nationally. This both applies to the general and the vocationally-oriented courses of education. The prerequisite for achieving this target is a significantly strengthened effort within five areas: *qualifications and competences, flexibility, innovation, freedom of choice and output management.*

At the general level, the aim is that everyone should acquire a number of individual competences as well as be prepared to take part in society and know about its basic values. Society is subject to rapid changes - technical as well as cultural. It is therefore essential to maintain values such as freedom of speech, equality, tolerance and democracy. We must know our past and the basis on which our values are founded in order to be able to face the challenges of the future.

Education should develop pupils and students as independent individuals by promoting such qualities as initiative, courage, enthusiasm and the desire to learn something new. With the rate at which new knowledge is created, it is of decisive importance that everybody has a basic foundation of general, personal and social competences, including the desire and ability to pursue further education. It is be-

coming more and more important to be able to acquire new competences both within one's own profession and in a combination of different professional areas.

Education should make it possible for the individual to cope on his or her own, to develop his or her potential and make his or her contribution to the civil society. In this way, education sustains the community and the common cultural identity. All people are committed to the whole - both in their choice of education and in their daily efforts. As pupils and students are becoming more skilled, the ability to take part in a social interaction with others must be challenged.

In the global economy, production and the use of new knowledge constitute the key to increased growth, increased employment and increased welfare. The government's growth strategy, *Determined Growth*, points at a first-class education system as a decisive parameter for ensuring growth and welfare. Denmark's competitiveness will depend greatly on whether Danish education can live up to the requirements of increased proficiency, competence and quality as well as progress in the subjects - measured by international and not least by EU standards. Society and the business community depend on staff who are able to use and communicate knowledge and translate new knowledge into innovation. In the same way the foundation of an efficient public sector is well-educated staff at all levels.

Furthermore, the growth of the Danish economy will depend on an increase in the workforce and on keeping potential candidates for early retirement in the labour market. The demographic development with an increasing number of older people and a decreasing demographic intake requires that young people move more rapidly through the education system and out into the labour market. Time wasted, wrong choices and waiting periods must be reduced, among other things through a target-oriented vocational and educational guidance and through better credit transfer possibilities from one course of education to another.

Increased proficiency and competence and quality measured by international standards require a strengthening of the international dimension in education. International approaches must be integrated into the teaching in all courses and subjects. Young people must acquire cultural competences with a view to being able to cope in an internationally oriented world. Research experience from other countries must be included on a par with Danish experience, and knowledge about Denmark's international cooperation relations and commitments is a prerequisite for a future-proven education sector.

Denmark must take active part in international quality development, evaluation and benchmarking and use the results to a greater extent, if it is to attain the target of matching the Danish education system with the best in the world. We must, through international cooperation, take advantage of the opportunities and be inspired by good examples from other countries with regard to organisation, teaching and innovation.

The recognition of results and credits acquired at educational institutions abroad must to a greater extent contribute to the international mobility of students, teachers and the working population. At the same time, it must to a greater extent be possible to have experience and prior learning recognised abroad.

In the higher education area Denmark takes an active part in the Bologna process, which is among other things to ensure a European credit transfer system, comparable degrees and better quality. In the field of vocational education and training a similar cooperation is in the pipeline. The aim of this cooperation is to ensure that the individual can get his or her vocational qualifications recognised and be able to move freely between different jobs in different countries.

■ Qualifications and competences

A high and relevant standard when it comes to qualifications and competences must be ensured at all levels of the education system, on the one hand in relation to the contents of the programmes, and on the other hand in relation to all the educational courses offered and to the educational structure.

There must be coherence and progression in the proficiency and competence requirements throughout the entire education system. The basic, general, social, cultural and personal competences must be taken into account, and the proficiency and competence requirement, the level of the teaching and the relevant competences must be constantly developed. The educational courses offered must be constantly adapted to the structurally - conditioned competence requirements in the Danish business sector.

The proficiency and competence level on the individual levels of the education system must be ensured. Inadequate qualifications and competence at one level must not result in dropout from the subsequent level of education.

The courses of education must be reviewed from a new perspective in order to identify the profile of the individual subjects and their social relevance. It is the aim to ensure dynamic proficiency, qualification and competence, however, the overall target is to create a total supply of courses of education, where both the quality of the subject matter and the social relevance are in focus. The quality of the subject matter and the social relevance in the university programmes must be strengthened through cooperation between universities, the business sector, sector research institutions and the other knowledge centres.

The identity of a course of education must be defined through a number of objectives which describe the subject-specific expertise and skills which make up the content foundation of the course. This foundation will at the same

time form the basis of the continued development of competences - including the various specialisations. As far as the research-based programmes are concerned the driving force is the development of the research, the cooperation with the business sector and the cooperation between universities and sector research institutions.

Emphasis must be laid on clear formulations of targets for the individual subjects, levels of education, programmes and institutions complete with clear criteria for the assessment of the achievement of targets. A clearer formulation of targets must on the one hand strengthen the basis for the teaching, and on the other hand it must be able to document on a continuous basis how a strengthening of the proficiency, qualification and competence level is taking place in the individual institutions.

The targets must reflect that the programmes are to contain subject-specific challenges for all, also the most gifted. Everybody must be challenged to perform their very best. The teaching must be target-oriented towards the individual pupil with the point of departure in his or her abilities and development potential.

A strengthening of educational proficiency must contain various concrete targets - dependent on whether the focus is on the general or on the vocationally oriented courses of education. With the point of departure in the general courses of education, the target is in particular set on a strengthening of qualification and competence in the natural sciences subjects, mathematics, Danish and in foreign languages. As far as the research-based courses are concerned, the guidance given by the lecturers and their qualifications in pedagogy and communication must be further enhanced.

■ Flexibility

The education system must be able to live up to the recipients' expectations regarding employees with relevant qual-

ifications and competences. Both the structure of the education system and the organisation of the individual courses offered must be based on the greatest possible flexibility - also in connection with the students' possibilities of choosing a course of education. The focus must be put on lifelong learning, modular courses and e-learning. In the vocational education and training and the short and medium-cycle higher education areas, recognition of the individual's prior learning must be much more common. Prior learning is also relevant in connection with the universities' Master programmes. We must move away from the concept where competences are only created within the education system. For they are also to a very great extent developed in the place of work, through participation in liberal adult education, voluntary work in associations etc. It should be made possible to acquire competences - including entrance competence - in different ways so that there can be a difference from individual to individual. It does not, however, mean that the government will slacken its subject-specific requirements, for instance its entrance requirements for programmes leading to authorisations.

On the basis of experience from other countries, the government will take an initiative with a view to developing reliable and accepted methods for the individual development of competences in cooperation with the business sector and the educational institutions. The focus must to a greater extent be set on "what a person can do" rather than on "what he or she has" in the form of certificates.

As many as possible must complete a qualifying course of education. However, possibilities must be created in particular within vocational education and training for people to acquire vocational competences earlier than at present. After a period of time, it should be possible to get on the educational train again and strengthen and further develop the vocational competences acquired previously.

It is therefore of decisive importance that the education system can ensure offers of quality and relevance to the

individual throughout his or her life. It must be possible to acquire vocational competences in various ways and with different durations of study.

In this context, also the work with credit transfer must be given a higher priority with a view to ensuring flexibility and increased mobility in the education system, nationally as well as internationally.

■ Innovation and entrepreneurship culture

Flexibility must also support a change of attitude towards a culture which inspires innovation and entrepreneurship. The desire to work must be given back to pupils and students, and young people must in general be prepared for a working life in the labour market of the future, where it is both challenging and attractive to start something new and be independent.

It is important for the business sector's ability to hold its own against international competition to reduce the distance between the birth of an idea, in a research environment for instance, and its conversion into a product marketed by a company. Education is instrumental in ensuring new knowledge and are given the ability to translate research and new ideas into their individual practice.

We are not performing very well in this area today. It is here that the education system has a central role to play. There are many talented young people, but we do not educate a sufficient number of them to become entrepreneurs. Denmark has an unused potential in this area, and the government aims to exploit this potential. Young people are to be given the tools and competences that enable them to become talented and growth-enhancing entrepreneurs - the most gifted and most highly educated of them should become knowledge-based and high technological entrepreneurs, who make use of their competences in a business-related context.

Society's investments in education will only give the necessary yield in the form of growth and welfare if there is a close interaction between the entire education system, the university and sector research and the business sector. The research results must be disseminated to the surrounding world through cooperation with public and private companies. This requires highly educated employees and an enhanced entrepreneurship culture. The government wants better opportunities for and a positive attitude towards innovation and entrepreneurship in the education system. This will come through an increased focus on entrepreneurship culture at all levels and within all courses of education. The government will make an effort to strengthen the structural and content-related elements required for the inclusion of innovation and entrepreneurship in our education system, and it will therefore present an action plan in the autumn, the aim of which is to create more entrepreneurs.

■ Free choice

The government highly values the citizen's free choice. There must be a free choice of educational institution, and here it is very important for the government that a relevant supply of education and training is ensured all over the country through a regionally balanced institutional structure.

There must be a greater flexibility for pupils and students to adapt their education through courses offered by different institutions - for instance within the general upper secondary programmes. However, it must be stressed that the freedom to put together a course of education must not be introduced at the expense of qualification and competence. The institutions should to a greater extent take part in cross-institutional network cooperation with a view to supporting flexibility. Existing barriers to a maximum flexibility should be removed.

The freedom to choose a course of education does of course require that one has the necessary skills, and that the future

prospects for the subject seem promising. There is no sense in educating young people for unemployment, when at the same time there is a shortage of people in various sectors. The courses of education are therefore not only to support the business sector's need for competences, but in important areas also its recruitment needs. When it comes to for instance the health area, where there is already an increasing demand for labour, the government will consider incentives which may increase the intake to the social and health education programmes, including the basic social and health education programmes and the nursing programme. The same is the case with the natural sciences and technical university programmes, where the intake of students and the completion rate must be increased with a view to coping with the shortage of labour in these areas. Thus in particular, the medical industry, the IT sector and the biotechnological companies are growth areas with recruitment problems and a great need for employees with research-based qualifications. This should be taken into account in the new thinking about research-based education programmes.

Relevant and available information about the contents, quality and the achievement of targets is also a prerequisite if citizens and companies are to choose education and school or educational institution freely and on an informed basis. Transparency and openness will further the basis for lasting choices of both education and institutions and thus for a quicker completion of the programmes. The government will present proposals which are to strengthen the educational and vocational guidance effort, also involving more coherence across the different sectors. The guidance offered should be made more transparent and more easily available to the individual citizen - among other things through an increased use of IT. In this way, the guidance offered contributes to ensuring that there really is a free choice for the individual young person. Furthermore, the guidance of young people must to a greater extent focus on initiatives that sustain entrepreneurship.

■ Output management

The institutions are to be given a greater degree of freedom and a better framework for quality development. The educational institutions must have adequate freedom to be able to meet the new requirements of increased quality, proficiency and competences. An increased self-management requires well-functioning, sustainable and regionally based educational institutions - institutions, which can offer flexible and relevant solutions that are adapted to the competence needs of the students and companies, and which can ensure strong and relevant educational possibilities for everyone throughout the country.

A consistent renewal of the way in which educational institutions are managed is a cornerstone of the government's educational policy. There must be a new and clear division of tasks between educational institutions and central regulation which places the educational institutions in a stronger position in their daily work and in the organisation of future quality development. The management concept must be changed into a coherent development-oriented management concept with the focus on principles regarding self-evaluation and based on requirements with regard to the institutions' entire work on quality.

As a consequence of the decentralised management form, a detailed set of rules and subsequent checking of the individual institutions' observance of these rules must be replaced by a more result-oriented supervision which is to a greater extent characterised by the overall supervision of results and analysis of the institutions' framework conditions for ensuring that they have the optimal conditions for delivering high quality.

One element in the renewal is greater transparency and openness, where among other things output indicators are to provide relevant information for the stakeholders of the institutions - students, recipients, local and regional stakeholders, staff etc. and at the same time create the basis for

an active involvement of the stakeholders' assessment of the quality and the results provided by the institutions. The quality of the teaching and the development of proficiency and competences must be documented through tests and examinations which match the targets set and which render visible the individual students' benefit from the teaching. There is thus a need to work with the development of new examination and test forms, among other things in general upper secondary education and in the university area. Furthermore it should take place through evaluations of the programmes, both self-evaluations and evaluations carried out by the individual institution as well as cross-cutting evaluations.

In order to improve and ensure the educational institutions' quality development work, agreements are used based on the institutions' freedom and responsibility for prioritising and weighting. The agreements take their point of departure in a formulation of action areas and targets for the respective educational sectors and the higher education programmes with the addition of new action areas and targets to the multi-annual agreement from 2001. It will require a special effort from management, which must initiate and support development projects and be visible - also when it comes to salaries.

The economic framework of the initiatives in the action plan and the follow-up to this are the funds already set aside in the Budget for 2002, including the ministries' conversion funds etc. The implementation of the initiatives must as far as possible take place in the form of agreements which take their point of departure in objective distribution criteria according to which the institutions at the same time commit themselves to reporting in relation to a number of objectives agreed beforehand, including a number of indicators for quality and efficiency. In the university area, the implementation will take place in connection with structural reforms.

C H A P T E R 2

Educational policy action areas



■ GENERAL EDUCATION

■ The Folkeskole (primary and lower secondary education)

The Folkeskole is the basis of all subsequent education. It is therefore of decisive importance that the individual pupil is given the best possible proficiency and competence foundation to build on, when he or she leaves the Folkeskole. The most recent international studies have however shown that the proficiency and competence level in the Danish Folkeskole does not match that of most other countries with which we normally compare ourselves in spite of the fact that it is one of the most expensive in the world. Against this background the Minister of Education has among other things launched the proposal “10 steps towards a better Folkeskole”, which contains a number of initiatives which are to strengthen the proficiency and competence level in the Folkeskole, and at the same time the municipalities are to be given greater flexibility when it comes to organising their own school system so that the resources are spent in the most appropriate way in relation to the pupils' benefitting from the teaching.

In order to support the initiatives in “10 steps towards a better Folkeskole”, the government will, in cooperation with the municipalities, ensure a more target-oriented and flexible organisation of the in-service training and courses offered to teachers. This is a necessity, both if we are to increase the proficiency and competence level in the actual teaching and if we are to pave the way for the introduction of forms of teaching with an increased focus on for instance integrated school start and group formation across classes and year groups.

The government's high ambition level for the Folkeskole will also set new and more stringent requirements when it comes to the role of the head teacher. In order to provide the head teachers with the necessary tools to perform this

role, the government will introduce a diploma programme in school management.

The government's initiatives in the Folkeskole area are thus to be seen in close connection with and as a part of the foundation of the government's action plan for *Better Education*.

■ General upper secondary education

The government will initiate reforms of the Gymnasium and HF and as far as necessary of the HHX and HTX, so that reforms and adjustments form part of a coherent perspective for the entire area of education. A greater focus will be put on the general upper secondary education programmes as education courses preparing for further studies. At the same time, it is the aim to have equal general upper secondary programmes, which together and separately are to appear with clear profiles vis-à-vis the other upper secondary programmes. The reforms will be carried out as a continuation of the innovation and development work which has been carried out in the past few years.

The primary target of the reforms is to strengthen the proficiency and competence level of the programmes so that the academic competences of the general upper secondary programmes are improved, and so that the content of the programmes ensures that the pupils get the competences they need in their further studies. Hereby, a greater conformity regarding the admission requirements to the higher education programmes will be achieved.

A uniform national proficiency and competence standard is to be maintained in the general upper secondary programmes, among other things through the formulation of clear targets, a national examination system and evaluations.

At the same time, there must be greater flexibility between the general upper secondary programmes themselves, including the possibility of free choice between certain op-

tional subjects in the different programmes as well as the secondment of teachers. The government wishes to have a better exploitation of the cooperation possibilities between the general upper secondary education institutions and will aim at removing the barriers for such cooperation.

Furthermore the aim will be to create a better credit transfer scheme for the general and vocational upper secondary programmes where it must be possible to have previously completed/passed subjects - or parts hereof - recognised in the case of transition to a new programme, so that barriers can be removed, and double qualifications avoided.

The concrete initiatives range from general reforms of the content to more specific initiatives aimed at increasing the proficiency and competence level in special areas such as Danish, foreign languages, natural sciences and mathematics. In the reforms, the emphasis is laid on new working and evaluation methods. Emphasis is also laid on a changed management concept, where detailed control of content and input is replaced by an output-oriented target and framework management which gives the individual institution more responsibility and a freer framework for achieving the targets and for documenting the achievement of the targets.

Reform of the Gymnasium

The target of a Gymnasium reform is to improve young people's real study competence and thus strengthen the basis for getting more young people through a higher education programme. The Gymnasium must give all pupils subject-specific and personal challenges. Better possibilities are to be created for immersion into the subject and interaction between subjects, and an increased emphasis is to be laid on the natural sciences. The Gymnasium has two declared aims: to give a general education and to prepare for further studies. The aim of the teaching is to build on the knowledge gained in the 9 years of the Folkeskole and to contribute to the personal development of the pupils and to

develop their interest for and ability to take an active part in a democratic society.

The present Gymnasium has a broad recruitment basis - so broad that some pupils consider the competence level of the Gymnasium to be irrelevant to them and far too theoretical when compared with their thoughts about future education, whereas other pupils feel that the teaching does not offer them sufficient challenges. This gives rise to the observed lack of study motivation and the increasing truancy.

The present curricula are very comprehensive and detailed and may be considered to be an obstacle to the development of new qualifications, proficiency and competences which make room for new working methods and a greater use of IT.

The many obligatory subjects may be instrumental in limiting the possibilities of immersion and of making the relevant choices of subjects with a view to the further choice of education.

In 1999, the Danish Parliament adopted the development programme for the upper secondary programmes of the future. As part of the development programme, a great number of specific innovation and development projects and a number of comprehensive structural experiments have been initiated. The experience from these innovation and development projects is used in the continuous development of the Gymnasium and thus becomes part of the basis for a reform of the Gymnasium.

The reform is to be implemented together with a reform of the HF programme and possible adjustments of HHX and HTX, so that the general upper secondary programmes together and separately appear with clear profiles. The aim is furthermore to increase the interaction between the general upper secondary programmes and a strengthening of the possibilities of the individual school to create its own subject-specific profile.

The target group of the Gymnasium is:

- Young people, who aim at enrolment in higher education, and who are interested in knowledge, in seeing things in perspective and in abstraction
- Young people who primarily enter directly from the 9th form of the Folkeskole.

The Gymnasium is characterised by a high proficiency and competence level and by requiring that the pupils have a personal commitment in and a sense of responsibility vis-à-vis the course of study. The requirements must be seen in the right perspective so that the pupils acquire a real study competence which is directed towards the higher education programmes. As it is a general education programme, emphasis must be laid on making it possible for the pupils to develop a personal, social and cultural identity.

With a view to obtaining a strengthening of the real study competence, the reform is to be characterised by the following:

- Emphasis on an interaction between subjects (proficiency, qualifications and competences as opposed to subjects)
- Emphasis on immersion
- Target management instead of content management
- Progression in working methods and examination forms with a view to obtaining increased study competence
- Strengthening of the natural sciences subjects and elements of education
- Removal of the present division into subject lines and the introduction of a short common introductory period for all students before the final choice of subject combinations (lines/subject packages).

The overall emphasis is laid on giving the individual pupil more options and on target-orienting these options more towards the subsequent education and profession. This is obtained by setting aside more lessons for optional subjects organised as “subject packages” and for totally free options

and at the same time by allocating fewer lessons to the obligatory subjects. These subject packages ensure a greater interaction between the subjects. General themes of subject packages may for instance be: *modern languages; classical languages; mathematics and natural sciences; mathematics and social studies; natural sciences and philosophy; biology, chemistry and social studies.*

Within a specific framework, the individual school combines subjects and levels within the individual subject package. Furthermore, it will be possible for the individual pupil to choose free optional subjects, for instance creative subjects or a further subject at high level.

The teaching must take as its point of departure the fact that the pupils come from the 9th form of the Folkeskole. The teaching must be organised so that the pupils' curiosity and commitment are encouraged, and experimenting approaches to the subject-matter should be promoted. There should be more personal and subject-specific challenges, and the working methods and examination forms must set the stage so that during the course the pupils will assume an increasing responsibility for their own education.

The pupils are to be presented with central subjects and with the characteristic methods of these subjects as well as to problem complexes which can be analysed from the point of view of several subjects. Emphasis is laid on the fact that the pupils experience both the strength and fascination of the individual subjects and the qualities of a greater interaction between the subjects.

The Gymnasium must have a more significant subject-specific profile. Rather than the many specialised subjects in the present Gymnasium, the individual pupil must have fewer subjects and more time for immersion and study-like work forms, including more major independent assignments and projects. An innovation of the content must be provided on the basis of *target management* rather than content management. Target management is to give a greater degree

of freedom with regard to achieving the targets and is thus to make room for dynamic proficiency and competence.

The development from pupil to student must be given great importance. Clear criteria must be established for the achievement of targets, and evaluation forms must be developed which reflect to a greater extent the aims of the teaching. Emphasis must be laid on extensive use of IT in the teaching and in examinations.

There must be a general strengthening of the natural sciences subjects. The teaching must be modernised with a view to promoting the pupils' motivation for and interest in technology, natural sciences and scientific ways of thinking. Authentic problem complexes must be included in the teaching, and the cooperation with the business sector must be strengthened.

Today, the pupils must choose a subject line, before they know anything about the contents and working methods of the subjects at the general upper secondary level. In order to ensure that the individual pupil acquires a better basis to choose the final subject combination as well as a better basis for a target-oriented immersion into the subjects, the present division into subject lines will be replaced by a short common introductory period, followed by a choice of new subject lines/subject packages. The introductory package must contain humanities, social sciences and natural sciences subjects.

A conference is planned for the autumn 2002 on targets and contents in the pending reform of the Gymnasium with a view to drawing up a report for the Parliament in January 2003.

The government will present a bill on a reform of the Gymnasium in the autumn of 2003 with effect from August 2005.

Reform of the higher preparatory examination (HF)

Like the Gymnasium programme, the higher preparatory examination or HF programme is an academically oriented general upper secondary programme which, since the beginning of the 1970's, has had a double target:

- A 2-year coherent programme for pupils coming directly from the 10th form of the Folkeskole and for young people who to begin with have chosen another programme at upper secondary level and who wish to make another choice, or who have been in the education system for a while ("second chance" education). The 2-year programme is offered primarily by Gymnasiums
- Single-subject education for adults wishing to study at general upper secondary level. Single-subject HF is offered at adult education centres, so-called VUCs.

Throughout the 1990s, serious problems were observed with the HF programme, in particular with the 2-year HF programme. After the most recent changes of the Gymnasium and HF, the contents of the two programmes had become too much alike. At the same time, there were problems with the proficiency and competence level of the HF programme. This was on the one hand due to those on the course having a too low proficiency and competence level when entering the programme and a lack of motivation, and on the other hand it was due to the short duration of the programme. Furthermore, there was a relatively big dropout from the programme (approx. 25%). These problems motivated the initiation of comprehensive experimental work with a 2 and 3-year HF from the school year 1997/98.

From the school year 2000/2001, the experiments were also extended to also comprise single-subject HF at VUC, where new types of participants - some quite young and others in employment - have led to a need for new pedagogical methods and for more flexible forms of organisation.

The round of experiments has now ended, and the final evaluations of the experiments have been published. A good basis for a reform of the programme is thus available.

The aim of a reform of the 2-year HF programme is to ensure a well-functioning 2-year general upper secondary education programme regarding proficiency and competence improving the HF pupils' real study competence and providing a relevant basis for a choice of education and profession. Through the introduction of pupil-activating working methods and a strengthened interaction between the subjects, the HF pupils must be stimulated to take a personal responsibility for their own course of education and thereby acquire competences which are more relevant than those provided by the present HF programme.

The reform of the single-subject HF programme for adults is - through flexible organisation methods - intended to ensure an adult group of course participants better possibilities of qualifying themselves both for further studies and for better job prospects.

The aim of the reform is to give the structure, content and pedagogical organisation of the HF programme an independent profile, which distinguishes itself clearly from that of both the other general upper secondary programmes (Gymnasium, HHX and HTX) and the other adult education programmes.

Basically, the HF programme is to continue to address itself to young people and adults who want to pursue a programme at general upper secondary level with a view to continuing in higher education. In structure and content, the HF programme must be characterised by flexibility so that the teaching can be organised in accordance with the students' very different prerequisites and goals. In accordance with the typical subsequent choice of study, this implies that there are still not to be any requirements about having to take optional subjects at the highest level A as a condition

for acquiring a HF examination. The students must however have the possibility of choosing subjects at level A.

HF maintains the general study competence, and dependent on the individual student's choice of subjects and levels it may give access to admission to all higher education programmes. At present, it will be possible to supplement a HF examination through the system of supplementary examination courses at general upper secondary level (GSK), and the possibility of participating in, for instance, commercial and technical programmes at the vocational colleges, will be established.

The flexibility in the programme is, in combination with the requirement of a high and strengthened proficiency and competence level, among other things an expression of the fact that there are different forms of and approaches to qualifications, proficiency and competence. As part of this flexibility, the role of HF as a power centre for subject-specific/pedagogical innovation in the general upper secondary programmes is to be re-established and developed with an increased emphasis on an individualised and IT supported approach to the teaching.

The reform is to lead to a number of quality improvements, which:

- Provide an innovation of the content on the basis of target management rather than content management with emphasis on the core of the subject as well as a subject-specific degree of freedom: this will allow for local decision-making with regard to methods and ways of doing things
- Comprehensively strengthen the proficiency and competences in a new form of which to a greater extent than before will stress the connections between the subjects, for instance through project-organised teaching
- Ensure the interaction between the subjects through a

thorough reorganisation of the major part of the teaching in “subject groups”, consisting of related subjects: “culture and society”; “mathematics and science” and “practical/aesthetical subjects”. The subject groups do not operate with fixed numbers of lessons per subject, it is left to the individual course establishment to plan the teaching so that the aims in the curriculum guidelines are met

- Change the teacher and pupil roles and thus the traditional teaching concept, not least with emphasis on workshop teaching and on IT as a catalyst for individualised teaching
- Lay increased emphasis on the practical and presentation perspective of the subjects
- Increase the commitment of the students and stimulate them to take responsibility for and take active part in their course of education through the introduction of modern working and organisational methods
- Ensure the achievement of targets through the introduction of new evaluation forms which reflect to a greater degree the aims of the teaching
- Make it possible for the individual HF course establishment to create its own profile of the programme through certain subject packages (e.g. such as “languages”, “health”, “the environment”, “pedagogy” and “communication”), which aim at certain short- and medium-cycle higher education programme both in the public and the private sector.

With a reform of the *single-subject HF courses*, it is the main aim, not least through a clearer distinction between single-subjects for adults and the coherent 2-year programme for young people, to create better conditions so that a very heterogeneous group of adult students can qualify themselves for further education or strengthen their qualifications with a view to getting better job prospects.

A special Ministry of Education executive order will be drawn up for single-subject HF in full consideration of the connection and interaction with general adult education at lower secondary education level (in Danish AVU). The pedagogical improvements of the quality, for which the stage is set in a 2-year course, may fully apply to single-subject HF in those cases where HF-subjects are offered in packages aiming at certain higher education programmes. Also in the case of actual single-subject teaching, there will be a thorough revision of the traditional teaching concept and the traditional subjects, such as:

- The highest possible degree of flexibility is ensured with the many forms of organisation and varying number of lessons which can accommodate adult participants' very diverse prerequisites - and their wishes and needs in relation to further education and work
- A possibility is established for introducing new subjects and offering new teaching in parts of subjects
- Changes will be made in the provisions concerning compulsory attendance in order to accommodate the adult participant's work and life situation. This is done in connection with the introduction of virtual working methods and evaluations and documentation of the subject-specific benefit during the course.

The government will present a proposal to Parliament for a reform of the HF in the autumn of 2002 with effect from august 2004.

Development of the vocationally oriented general upper secondary programmes (HHX and HTX)

The HHX and HTX are general upper secondary education programmes with a significant business-related content - the HHX with the main emphasis on business and socio-economically oriented subject areas as well as on foreign

languages, and the HTX with the main emphasis on technical and technology subjects as well as on natural sciences subjects. They are offered by vocational colleges, and in the 1st year to some extent they have common subjects with the basic course of the vocational education and training programmes. The experience gained from this makes it necessary to carry out a more detailed analysis of how the subject-specific progression in particular in the 1st year can be organised with an increased benefit to the pupils.

In connection with the reforms of the general upper secondary area, the focus will be set on the profile and proficiency and competence level of the programmes, including their vocationally related content and the study competence of the pupils. Furthermore it is necessary to make an effort regarding strengthening the completion rate.

This will take place in the period up to 2004.

■ THE VOCATIONALLY ORIENTED PROGRAMMES

■ Vocational education and training (EUD) and continuing vocational training programmes (AMU)

The vocational education and training programmes at upper secondary education level (in Danish EUD) and the continuing vocational training programmes for adults (in Danish AMU) are facing major challenges at present from the labour market which demands an increasingly vocationally well-founded and flexible workforce. The programmes must accommodate a labour market, subject to continuous changes with new production methods, technologies and ways of organising work.

It is therefore essential that the EUD and AMU programmes are adapted to the requirements of increased flexibility and a strengthening of the competence level. The education and training institutions must offer vocationally programmes with a strong and flexible vocational profile. The supply of

education and training must be broad, flexible, transparent and innovative and provide the individual with a real possibility of lifelong development of his or her competences. The point of departure is to a greater extent to meet the needs and expectations of citizens, companies and the sectors when programmes are designed and organised.

The general principle in the vocational and training programmes must be that the individual is able to obtain the desired and demanded competences in many different ways and with varying lengths of study. Systems and rules must not create barriers for the individual or for companies in order to promote employability and ensure a well-qualified workforce. The learning opportunities must be visible and immediately comprehensible for the individual as well as companies.

In the *EUD programmes*, the alternance training principle is to be assessed and reconsidered with involvement of the relevant stakeholders. Especially the requirements with regard to the duration of education and practical training at the workplace are to be reduced. A more differentiated supply of education and training must be developed with varied forms of organisation and admission requirements. The balance between practical training at the workplace and school-based education must be reconsidered, in particular the school-based practical training. Generally, the proficiency and competence level must be strengthened, and it should be considered whether some EUD programmes should be turned into short-cycle higher education programmes.

The situation regarding the practical training place, the proficiency and competences and the labour market relevance must be reconsidered. Strengthened guidance must contribute to reducing the dropout and double qualifications, in particular within the commercial EUD-area. Among the technical EUD programmes, it is in particular within the new or rapidly changing employment areas, e.g. the IT area, that new solutions must be found to problems with demand for labour and shortage of practical training places.

For the *AMU programmes*, focus must be on the development of competences with immediate relevance for the practical training, including the interaction between the qualification needs of the company and the development of the individual's competences. The AMU programmes must have a greater flexibility, and the numerous training plans must be transformed into more flexible plans which can respond to needs occurring at local level.

It should be *considered merging the EUD and AMU programmes*, when need for this occur in the labour market. Among other things, the credit transfer possibilities between the programmes must be reconsidered and rendered visible, easier access must be provided to electronic information about the programmes, and a common evaluation system must be developed for systematic quality and result measurements.

A strengthened European cooperation on mutual recognition within the EUD and AMU areas is on the agenda during the Danish EU presidency in the 2nd half of 2002. Through this, the international dimension in education and training and mobility will be strengthened.

In the following, concrete proposals are presented which take up the challenges and formulate initiatives that contribute to a strengthening of the overall effort within EUD and AMU areas.

Renewal of the commercial EUD vocational and training programmes

The EUD programmes are facing great challenges in connection with recruitment, practical training place problems and a huge dropout. The programmes, which cover a great and differentiated field of employment with very different conditions and development features, need differentiated solutions, which accommodate the needs of the individual branch or employment areas rather than standardised solutions for the entire area.

The government will therefore present proposals for a renewal of the commercial EUD programmes, which will specifically ensure that:

- More flexible basic and main courses are developed for the commercial programmes
- Courses of different duration and depth are created which are connected with different job profiles and provide a recognised vocational competence at different levels, and which subsequently make it possible to start the programme at different levels
- The pupil gets a better basis for and access to further education and continuing training
- Methods for assessment of prior learning are developed so that credit can be obtained for already acquired competences in relation to the admission requirements and final objectives of the commercial programmes as well as in the case of a change of programme between the commercial specialisations and in the case of a change of programme to and from other programmes.

The interaction between the short-cycle higher education programmes and the EUD programmes will form part of the work, and new solutions will be developed to replace the school-based practical training.

Proposals will be presented in the spring of 2003, and the legislation will enter into force in 2004.

Renewal of the framework of the technical vocational education and training EUD programmes and changes in individual programmes

The constant practical training place problems within the technical EUD programmes prove that in spite of the increase in the possibility of flexibility in the EUD reform

2000 there is a need for an initiative which makes the technical EUD programmes even more flexible.

The problems have in particular appeared within new areas of employment and areas where there are great shifts in employment, e.g. the IT related area of education.

An assessment will therefore be made of the practical training place situation, proficiency and competences, the labour market relevance etc cutting across all technical EUD programmes with a view to taking initiatives and presenting proposals which ensure flexible courses of education of different duration and depth, and which provide a recognised vocational competence with a possibility of later upgrading it to a higher level.

Furthermore, an assessment will be made of the types of institutions which are best suited to offer the various vocationally oriented programmes, e.g. in the field of agriculture.

The interaction between short-cycle higher education programmes, the vocationally oriented general upper secondary programmes (HTX) and the EUD programmes will form part of the work. The reflections about new solutions in replacement of the school-based practical training will furthermore form part of the work.

Proposals for legislation and amendments will be presented to Parliament in 2003.

Initiatives to strengthen a new coherence between EUD and AMU programmes

The government's aim of improving the qualifications of the workforce must be ensured through vocationally oriented basic, adult and continuing training programmes. The programmes are to meet the needs of a labour market subject to constant changes, where new and more traditional production methods, technologies and ways of organising work exist side by side.

There is a need to ensure a EUD system (vocational upper secondary education) and an AMU system (continuing vocational training) of high quality with strong vocationally oriented basic courses and flexible adult education and continuing training programmes. The education and training supply must be broad, flexible, transparent and functional so that the individual has a real possibility of lifelong development of his or her competences.

Therefore, a process will be initiated in which the legal basis and the forms of description in the EUD- and the AMU programmes are harmonised. This is to contribute to:

- An optimisation of the supply of single subjects in EUD and AMU programmes
- The award of credit for completed labour market training in EUD/adult vocational training programmes
- A systematic evaluation and measurement of results
- The coordination of the development work in and transversely to EUD and AMU programmes.

There is furthermore to be easier access to electronic information about EUD and AMU programmes.

In 2002, amendments will be proposed to the Parliament concerning the harmonisation of the legal basis, and in 2003 the administrative systems will be adapted, and in 2004 systematic evaluations and measurements of results will be initiated.

Further development of the AMU programmes - development of competences with immediate relevance for the practical training

There are more than 2,000 different training plans in AMU. Each individual training plan is described in a centrally

approved plan, which indicates the targets and framework of the programme. All plans, irrespective of activity level, are subject to the same development and approval process. Each individual programme is assessed in relation to the training places which should be able to offer it. It is unclear for the users where they are to go and administratively burdensome for the training places, who may have to borrow course approvals from each other. This implies an inflexible and confusing system, which does not to a sufficient extent meet the user's specific local and regional needs in the shortest possible time.

Therefore, a new AMU concept must be developed, which is more target-oriented, flexible, transparent and dynamic, and which can ensure that:

- The training places get a greater local/regional liberty of action so that significant parts of the decision-making competence is close to the users
- The approx. 2,000 training plans are to be replaced by much fewer user-friendly, broad and future-oriented descriptions of competence areas within which there must be a dynamic development of national training targets in step with the development in the labour market
- The users and the training institutions are able to put together AMU programmes from the whole range of training targets so that a bridge can be built between the learning that takes place in the programmes and the formal and non-formal learning which is acquired at the workplace
- The training places are able to organise the AMU programmes flexibly in relation to the needs of the users, e.g. in the companies in the form of distance learning, and they may shorten the programme in relation to the needs of the individual participants
- The users can have their previous learning assessed and

obtain credits for them in relation to the individual programme or for a competence development plan

- Assessment types and quality assurance tools are suited for assessing the participants and the programmes and thus make the training places' output visible
- The approval procedures of the individual programmes are simplified
- The approval of training places for competence descriptions is given in such a way as to promote proficiency and competences, economic sustainability and transparency, in particular seen in connection with approvals for vocationally-oriented basic courses
- An efficient interaction between AMU and single-subject EUD etc. with a view to obtaining educational synergy and optimal resource exploitation.

In the autumn 2002, the government will present proposals for a new Act on vocationally oriented adult education and continuing training. The proposal is the 3rd phase of the government's effort to merge and strengthen the education and training offered within the EUD and AMU programmes. The two first phases concerning financial management and institutional structure were adopted in the spring 2002 through the Act on the financing of labour market training and the Act on institutions for vocationally oriented education.

Increased European cooperation on mutual recognition within the EUD and AMU areas

The European Council has encouraged the implementation of measures in the vocational education and training area concerning mutual recognition of vocational qualifications and competences in relation to transnational employment and participation in education and training corresponding

to those adopted in the area of higher education (the so-called Bologna process).

The background is the increasing importance that is being attached to vocational education and training when it comes to increased employment, mobility etc. Inspired by the Bologna process within higher education, the Commission has taken the initiative to establish a strengthened European cooperation regarding mutual recognition of vocational qualifications and competences. The Danish government has therefore decided that the vocational education and training area is to be given a higher priority during the Danish EU Presidency.

This specifically implies that the government will work for the adoption of a resolution on a strengthened cooperation between European countries in the vocational education and training area. The resolution is to contribute to overcoming the obstacles to mobility and ensuring the recognition of qualifications in relation to employment and participation in education across national boundaries.

At national level, the initiative is to contribute to the achievement of the targets regarding an increase in the workforce, and in particular foreign citizens' access to the labour market and the education system.

At European level, the initiative is to contribute to increased mobility, transparency and the development of a closer cooperation on quality development in the field of education as well as to support the prioritised targets set by the EU, among other things in relation to the employment area, as well as targets in relation to the development of the education systems.

Courses building on the vocational education and training EUD programmes

The government would like all young people who are studying to meet challenges which match their com-

petences. This also applies to pupils participating in vocational education and training courses.

The legal framework must therefore be provided so that EUD students can acquire a general study competence in addition to their vocational competence. The study competence is to be acquired through a course of education which is adapted and which utilises the relevant parts of the EUD programme, including both periods of time in the school and practical training at the workplace.

The vocational competence of the pupils is obtained in a course which comprises the ordinary EUD programme, but it requires the student to complete a number of the basic and optional subjects of the programme at general upper secondary level. It may furthermore be required that the practical training is organised in such a way that the aims of the practical training are attained within a shortened period of training practice. By building on the synergy between the vocationally and educationally qualifying elements of the total course, the total duration of the programme must still be held within a framework of approx. 5 years. The organisation of vocational education and training programmes with this addition will require a more flexible credit transfer system so that different subjects or courses can to a certain extent replace each other and will require the possibility of distance learning, in particular during the students' practical training periods.

A bill will be presented to Parliament in the autumn of 2002.

Vocational basic programmes (EGU) organised by production schools

A number of production school pupils do not acquire sufficient skills for continuing in an ordinary programme or in employment. A flexible EGU programme (short vocational basic courses) can contribute to countering this problem through its strong guidance element and the very wide pos-

sibilities of acquiring vocational competence within all employment areas, e.g. as farm workers, cleaners or social and health service assistants. The close professional and pedagogical environment of the production schools is found to be an adequate point of departure for organising and carrying through EGU programmes. Among other things the schools have good contacts with the local business sector, and they therefore have the possibility of finding practical training places for the EGU participants. Furthermore, through an in-depth knowledge of the individual EGU participant, the schools are able to follow the participants in the EGU course, which as a main rule will take place outside the production school (with practical training hosts and at other training places, e.g. technical colleges). Today, the EGU is organised by the municipalities. For special target groups, the vocational colleges are responsible for the organisation. Approx. half of the municipalities, primarily urban municipalities, use the EGU.

There is thus a geographical imbalance. As the production schools are primarily located in small municipalities, it will be possible to complement the municipal effort through an EGU organised by production schools. Through the close contact between the municipalities and the production schools, it should be possible to ensure a coordinated effort. It is thus the aim that the EGU is to be developed all over the country to be offered to the target group of academically weak young people or young people who have not made up their minds about their future career.

The production schools must be provided with the same possibility of organising EGU programmes as the vocational colleges - i.e. for the often academically very weak group of young people who do not have the prerequisites for following one of the ordinary upper secondary programmes.

A bill will be presented to Parliament in the autumn of 2002.

■ Higher education

To meet the challenges in the global economy Denmark needs an education system of high quality and with a high proficiency and competence level measured on an international scale if we are to ensure growth and welfare both for the individual and for the Danish society. In the global economy, production and the use of new knowledge are the keys to increased growth, increased employment and greater welfare. Therefore today, education and research are central competition parameters of decisive importance regarding Denmark's competitiveness.

The constant changes in the needs of the labour market necessitate *a constant development of research and education*, so that they match the needs of both the business sector and the citizens for the development of skills as well as the changed requirements with regard to proficiency and competences. A decreasing workforce will to an ever increasing extent necessitate that our citizens are able to complete courses of education without any unnecessary waste of time and at the same time ensure the intake of new graduates to the labour market as quickly as possible. An improved real coherence must be ensured between the upper secondary programmes and the higher education programmes, among other things in connection with the reform of the Gymnasium. The proficiency and competences of the students within a number of central subjects must be in order, the study competence should be ensured in the upper secondary programmes, and educational guidance must be strengthened.

Against the background of analyses, charting and discussions with the social partners, it must be considered when the job functions and needs of the labour market require programmes which build on professional orientation, research affiliation as well as when there are specific needs for research-based bachelor- and master's degree programmes and PhD programmes. In this context, it is of central importance to determine whether the educational institutions

have research and teaching competences at a level which is sufficiently high for entering into strategic alliances and networks between institutions. The government will consider the composition and supply of programmes within the short, medium and long cycle higher education programmes, respectively.

The subject-specific requirements with regard to the *contents of research-affiliation agreements* between universities and medium-cycle higher education institutions must be specified with a view to ensuring that national and international research results are utilised both in medium-cycle higher education programmes and in diploma programmes. External evaluations must be made of those improvements in subject quality which occur through research affiliation agreements.

The Act on medium-cycle higher education, which was adopted by the Danish parliament in the summer of 2000, has created the basis for ensuring of the students' theoretical and practical qualifications at a high proficiency and competence level. With this act, the programmes have acquired a professional bachelor's degree level - and a title - at the level of the bachelor programmes of the universities, but which at the same time distinguishes itself through a higher degree of vocational and practice orientation. A professional bachelor programme thus allows for immediate employment or direct credit in connection with further education within diploma and master's degree programmes.

There is to be a *reform of the university programmes* within most areas. The overall target with the education reform is to offer a comprehensive choice of university programmes, where both the quality of the teaching and the social relevance are in focus. It is the aim to reduce the dropout and ensure that even more graduates enter the labour market sooner. The content and applicability of the bachelor and master's degree programmes must be strengthened, among other things with a view to meeting the future needs of both private and public companies for labour with a research-based education.

The content of the bachelor and master's degree programmes must be reformed, the recruitment basis for the researcher education must be strengthened, the coupling between teaching and research must be investigated, and the admission requirements to the bachelor programmes must be reconsidered. The individual bachelor and master's degree programmes must have a clear subject-specific coherence and a socially relevant competence profile. A greater focus will be placed on the bachelor programme and the master's degree programme as independent programmes. The bachelor programme offers the possibility to enter the labour market or to continue with several different master's degree programmes. The master's degree programmes build upon relevant bachelor programmes. The quality of the teaching and the relevance of the bachelor and master's degree programmes may be increased through a closer cooperation with sector research institutions. Their competences can to a greater extent be used in the programmes offered by the universities.

Strategic alliances and different forms of cooperation between the universities themselves and between universities and sector research institutions can in general be one of the central ways of improving the quality of the teaching.

Better researcher training programmes require an increase in the number of new graduates and an increase in the range of their knowledge so that an adequate recruitment basis is ensured. This is of central importance if we are to avoid a reduction in the quality, proficiency and competence level of the researcher training.

With the point of departure in Danish and foreign experience, it must be investigated how the connection between the international quality level of the research and the level of the teaching in the programmes can be documented. Against this background, a concept must be developed which links research and education together and ensures that the subject-specific research content in the individual

programmes continually reflects the latest research results in the area.

When admitting students with a professional bachelor education to the universities' master's degree programmes, a balance must be ensured between the consideration for increased credit/flexibility and the consideration for the academic level of the teaching and the social relevance. This balance must be ensured without creating unnecessary obstacles or limitations for the students. The mapping of the actual practice in the universities' master's degree programmes when admitting students and awarding credits to a.o. persons with a medium-cycle higher education will be useful in this respect.

Users and recipients of graduates from the further education system for adults require a flexible system, where the educational possibilities of the further education programmes for adults, diploma programmes and Master programmes (which are at the level of the short, medium and long-cycle higher education programmes, respectively) can be adapted both to the individual's needs and to changing needs in the labour market. The programmes are directed at adults with occupational experience.

In order to be admitted at present to the further education programmes for adults, the diploma programmes or the Master programmes under the further education system for adults, the requirement is a minimum of 2 years' occupational experience. The interpretation of this must however be reconsidered and made more flexible so that not only the number of years in the labour market, but just as much the prior learning the individual has acquired, is taken into consideration. It may entail a reduction of the required period, if a concrete clarification and assessment of the applicants' prior learning form part of the admission procedure. In this context, problems have been observed for certain groups of persons and programmes, including for instance the programmes at the IT universities.

In the following, we will present a number of proposals which specifically take up the challenge, and which contain initiatives which may contribute to strengthening the total educational effort within the areas of higher education and further education and continuing training.

Short and medium-cycle higher education programmes

The short and medium-cycle higher education programmes must be further developed with the point of departure in the needs of the recipients. New interdisciplinary educational combinations will among other things be able to support an increased application orientation in the programmes.

In the short-cycle higher education programmes there is to be a continued strengthening of the proficiency and competences and an innovation of the programmes as well as an assurance of the interaction with the business sector, among other things as a follow-up to the reform, where the new programmes were offered for the first time in 2000. On the background of the experience gained so far, more systematic methods and procedures must be developed for a continuous assurance of the quality. In particular, focus will be on three areas:

- A close dialogue between the business sector, the institutions and the Ministry about the needs of the labour market and the role of the programmes as a basis for a continuous development of the proficiency and competences.
- Upgrading of the teachers' competence profile, e.g. through "job swapping" as well as in-service training and further education.
- A systematic monitoring of the relevance of the programmes, on the one hand through clear measurable standards for proficiency, competence and quality - supported by the action areas in the pluri-annual agree-

ment for higher education (in this context documented via reporting from the institutions). And on the other hand through requirements as to a systematic evaluation of the proficiency, competences and the quality through the use of different external and internal evaluation methods (including self-evaluation).

Furthermore, the interaction with the vocational education and training programmes must furthermore be analysed - in particular the extent to which young people continue in a short-cycle higher education programme upon completion of an EUD programme.

With the reform of the medium-cycle higher education programmes in 2000, the professional bachelor title was introduced. The professional bachelor programme is at the same level as the universities' bachelor programmes, but distinguishes itself from these by containing both theory and practice. The programme gives immediate access to performing a job function - and it also gives direct credit for further education through the diploma master's degree programmes.

Before the end of 2003, the medium-cycle higher education programmes will have been subject to adjustments, upgrades or reforms with a view to reaching the professional bachelor level - such as it has been the case with the health education programmes, the nutritional programmes and most recently the social work programme. In the process, the focus will be on:

- The possibilities of research affiliation of centres for higher education and other institutions for medium-cycle higher education which offer professional bachelor programmes. The work will among other things build on the experience gained from the action area on knowledge and development functions in the multi-annual agreement.
- Whether the existing quality assurance mechanisms (examinations, external examiner schemes and continuous

evaluations) are enough, or whether there is a need for new tools and procedures.

In those instances where short-cycle higher education programmes are too short, a dialogue must be initiated between recipients and suppliers of medium-cycle higher education programmes with a view to making an assessment of the need for developing medium-cycle higher education programmes directed in particular towards the private sector. The universities and the recipients of the new graduates from the universities are involved in this dialogue. It must be decided which new programmes there is a need for, on the one hand within the ordinary education system, and on the other hand within further adult education as well as the diploma and Master area. The new programmes must exploit strengths in the private labour market, in particular within areas related to MEDICO/health, information and communication technology, biotechnology, food technology etc. The programmes must meet the needs of the labour market when it comes to being able to constantly meet the challenges of continuous innovation and product development.

In 2002 and 2003, there will be a follow-up on the reforms of the short and medium-cycle higher education programme with the development of new programmes and adjustments and an upgrading of the proficiency and competences in certain existing medium-cycle higher education programmes.

The development of flexible education and training courses within the framework of the further education system for adults

With the rapidly changing requirements and demands of the labour market for a workforce with relevant skills, it is essential that education and training are offered which can improve competence and ensure the possibility of further education and continuing training for adults in the work force.

The first further education programmes for adults have been established. These programmes will all be placed within the newly established vocational academy cooperation so as to ensure a geographical coverage of the courses offered in close proximity to the citizens and with a regional set-up which can at the same time cover the companies' further education and continuing training needs.

In order to ensure that the needs of the users - including those of the business sector - are met, systematic methods and procedures are to be established for a continuous documentation of the achievement of the targets for the quality development and for the strengthening of the proficiency and competences.

The diploma programmes are directed at adults with occupational experience. The need for new diploma programmes will be established under consideration of existing programmes, against the background of the development in the needs of the labour market and the demand from the individual users.

Both the further education programmes for adults and the diploma programmes are to be organised in modules. And the need for new adult education programmes will also be established under the consideration of existing programmes.

In 2002 and 2003, new programmes will be developed and offered.

■ University programmes

Public and private companies, the research sector and the education system, including the Gymnasium, are dependent on graduates and researchers from the universities with qualifications at the highest scientific level.

The international competition in the knowledge society constitutes new challenges for Danish education and re-

search. Production and the use of new knowledge are the keys to an increased growth, increased employment and greater welfare. Therefore, education and research are today central parameters of competition. Furthermore, in the coming years, there will be a need to employ many new graduates in general upper secondary education, among other things due to the arrival of another generation.

This gives rise to new and higher demands on the university programmes. The content of the subjects as well as the quality and relevance must be strengthened. The interaction between teaching and research and the connection between the bachelor and master's degree programmes and the researcher programme must be in focus. It requires a multi-pronged effort in relation to the university programmes.

Strengthening of the university programmes

The reform of the university programmes brings together several initiatives under the same heading: regarding a) a reform of the contents of the universities' bachelor and master's degree programmes, b) improved researcher education, c) an investigation of the link between research and education, d) a reassessment of the specific admission requirements of the bachelor programmes within certain subjects, and e) cooperation on subject-specific competences for teaching in general upper secondary education.

Reform of the content of university programmes

The content and relevance of the bachelor and master's degree programmes must be more apparent to students, teachers and recipients.

The new approach to the content of the bachelor and master's degree programmes must contribute to:

- Ensuring that both the bachelor programmes and the

master's degree programmes have their own subject-specific identity and competence profile, as well as ensuring a real progression from bachelor to master's degree, thus strengthening the competence and quality of both programmes

- Determining what is/should be a bachelor level and what is/should be a master's degree level. This distribution into levels has become more topical in the light of the Bologna Declaration and the introduction of the levels in the new further education system for adults, where in particular the Diploma and Master's levels are relevant
- Focussing to a greater extent on the bachelor programme as an independent programme which may lead to employment or to further studies in a master's degree programme
- Giving greater focus on the master's degree programme as an independent programme, which builds on relevant bachelor programmes, and which together with these can be target-oriented towards different job functions
- Independent bachelor and master's degree programmes, (and the deciding of their levels), ensuring increased flexibility, and better opportunities for credit/equivalence in the case of changes to the same or related programmes at another institution.

It is thus of decisive importance that a greater transparency is created for the students. They must experience that the different elements of the study programmes are interconnected to make a whole. At the same it must be perfectly clear exactly which professional competences the studies will provide. The students must also feel that the master's degree programmes are at a higher level than the bachelor programmes.

Improved researcher education

The graduates of the universities must primarily find employment upon completion of their studies as the employment of graduates is an efficient source of knowledge dissemination to public and private companies. The private business sector and the public research sector however, also have an increasing need for staff with a researcher education in the form of a PhD degree. One of the prerequisites for a high quality level in the Danish researcher education is a sufficiently strong “food chain” from the master’s degree level. In several areas, approx. 25% of a master’s degree year group continue in a PhD study programme. The “threshold pain” has thus been reached, as the quality of the researcher education drops, if the transition frequency exceeds this proportion.

One of the aims of strengthening the content of the teaching and reducing the dropout from the bachelor and master’s degree programmes is to ensure the food chain to the researcher programmes. Moreover, in the 2nd term of 2002, the Ministry of Science, Technology and Innovation is initiating a study of the perception of the PhD programme among “near-graduates”. It is among other things the intention to discover why qualified graduates opt out of the PhD programme. The study is furthermore intended to contribute to the continued work of making the PhD programme even more attractive.

Research-based teaching

The central element in the programmes offered by the universities is that the teaching is based on research, which among other things must ensure the highest scientific level and a continuous innovation of the theoretical and methodological content of the teaching.

It must therefore be investigated as to how it can be possible to develop a new concept for an integrated evaluation of education and research. The aim of initiating such a pro-

cess will be to document a connection between the international quality level of the research within the individual subject-areas and the level of the teaching in selected programmes.

Bachelor programmes' admission requirements

Most of the academic bachelor programmes set subject-specific requirements to applicants meaning that they must have passed certain subjects at a certain level, A, B or C level (where A is the highest level). It should be considered whether these subjects should as a minimum have been passed in order for the applicants to meet the admission requirement.

Today, if a student has taken these subjects in one examination, and has passed them, then the specific admission requirement will be met, irrespective of the mark obtained in the subject in question. If a student has not passed for instance mathematics, but has passed the general upper secondary school leaving examination as such, he still meets the admission requirement for mathematics.

A student's study-related qualifications are of great importance for the benefit gained from the teaching, for the change of studies and dropout, in particular in the first year of the bachelor programme.

The aim of students having improved starting level for the bachelor programme is therefore to ensure a better real subject-specific coherence between the upper secondary programmes and the university programmes. Most university programmes have - as a supplement to the requirement of a qualifying examination, also subject and level-specific admission requirements. In a number of programmes, there is thus a requirement that the applicant must have taken certain general upper secondary subjects, such as mathematics or English, at a certain level.

These requirements have been established after an assessment of what is necessary in order to be able to complete the programme. The requirements are laid down centrally, but the educational institutions may lay down additional requirements as to marks obtained, i.e. either requirements with regard to average or to marks in special subjects.

The government is looking into whether the consideration of the fact that a student has sufficient subject-specific qualifications justifies a demand to the effect that the applicant must have passed the subjects which are comprised by the specific admission requirement. As a minimum, it should be required that the average of several subjects comprised by the admission requirement should be at least 6.0 (13 being the highest possible) in order to meet the specific admission requirements.

Subject-specific competence for teaching in general upper secondary education

More students complete interdisciplinary university programmes, such as nano-technology (physics, chemistry, biology, technology) and bio-informatics (computer science, statistics, mathematics, molecular biology) rather than the more traditional 2-subject programmes.

It must be investigated how the question of these graduates' subject-specific competence for teaching in general upper secondary education is to be handled. This must be seen in the light of the impending shortage of general upper secondary teachers in natural sciences subjects.

Admission of graduates from a professional bachelor programme to the master's programmes

When admitting graduates from a professional bachelor programme/medium-cycle higher education programme to the master's degree programmes of the universities, a balance must be struck between on the one hand the con-

sideration for increased credit and flexibility and the consideration for the proficiency and competence level, on the other.

The aim of the admission of graduates from a professional bachelor programme/medium-cycle higher education programme to relevant master's degree-programmes is thus that graduates from a professional bachelor programme are to have direct access, i.e. without requirements regarding subject-specific supplements, whereas graduates from medium-cycle higher education programmes from before the adoption of the Act on medium-cycle higher education can be required to do a subject-specific supplement of up to 6 months.

The Ministry of Education and the universities entered into an agreement in 2001 about the registration of practice for the awarding of credits in connection with the intake to master's degree programmes. In accordance with the sharing of competence, this agreement is now administered by the Ministry of Science, Technology and Innovation. As part of the agreement, credit practice is registered as far as applicants with a medium-cycle higher education programme are concerned. As far as the universities are concerned, the procedure was initiated from the winter intake 2001/02.

The Ministry of Science, Technology and Innovation will supplement this agreement with a demand to the universities to the effect that they are to compile information regarding how graduates from a medium-cycle higher education programme cope in the master's degree programme, in particular when it comes to completion time and dropout rates, compared with persons with a research-based bachelor education from a university. It will subsequently be possible to use the results of this compilation of information in the development work which is taking place in the centres for higher education.

■ Art and Architecture programmes

Increased professional orientation

If the growth potential of the cultural sectors, which has among other things been described in a government review on the cultural and business-related policies, *Denmark's Creative Potential*, is to be realised, the professionally oriented elements in the programmes must be strengthened, and the interaction between the professions and the educational institutions must be intensified.

Improved possibilities of credit transfer and flexibility in the artistic programmes (i.e. design, music, architecture etc.) are to make it easier to combine these programmes with more business-oriented elements from other higher education programmes. In those programmes, where it may be relevant, practical training schemes are introduced, and the possibility of establishing advisory business panels will be investigated.

The initiatives of the action plan will form part of the agreement for the programmes under the responsibility of the Ministry of Cultural Affairs which will run for a number of years and which the Minister wishes to implement. The initiatives will be the point of departure for the subsequent result contracts which the Ministry of Cultural Affairs will enter into with the educational institutions in the area.

The work will be initiated in 2002.

Introduction of a 3+2 structure

In accordance with the Bologna Declaration, the artistic programmes must, where it is possible, in the future be organised according to a 3+2 structure corresponding to the bachelor and master's degree structure in the other higher education programmes. It is the aim to ensure a more flexible, transparent and coherent education system with a greater liberty of choice for the individual students, better

coherence between the programmes and better possibilities of adaptation in relation to the demand in the labour market.

Where it is possible, the artistic programmes are to be structured with bachelor and master's degree programmes. The work with the development of the artistic programmes will continue to be organised in such a way that the programmes correspond as far as possible with the other higher education programmes. The development of common courses of study will be initiated for students in the higher education programmes offered within the framework of the Ministry of Cultural Affairs and other ministries.

Strengthened research in design

According to the government's report on the cultural and industrial policies, *Denmark's Creative Potential*, the design area among others disposes of a particularly extensive growth potential. If this potential is to be realised, it is of decisive importance that the Danish research in the design area be strengthened. Research-based design education is a prerequisite for ensuring a 3+2 structure and full credits and flexibility for the design programmes so that they follow the international development and meet the needs of the business sector.

Research in the field of design must be strengthened and coordinated. The Ministry of Cultural Affairs must set aside more funds for design research, and the cooperation between the design schools and the schools of architecture on design research must be extended. It is the aim to make it possible in the course of the coming years to offer research-based design education in Denmark.

Geographical distribution and more specialised professional environments

In a time of rapid professional development, the geographical distribution of the artistic educational institutions

represents a risk that the professional environments become so small that it may hamper the competence level obtained in the programmes. In order to maintain a high competence level and a fruitful study environment, the division of labour between the institutions must be increased so as to ensure bigger and more specialised professional environments. Hereby, it will both be possible to improve the competence level and maintain the geographical distribution of the institutions and at the same time ensure that there is as far as possible a balance between the supply and the demand in the area.

The distribution of the subjects between the institutions must be revised and adjusted with a view to ensuring a high proficiency and competence level in the individual educational environments and a dimension that is in accordance with the needs of the labour market.

Raising of IT level

The programmes under the Ministry of Cultural Affairs are largely directed towards the professions of the information and media sector. In order to ensure a high proficiency and competence level in these programmes and an immediate desire on the part of the graduates to participate in practical training, it is a decisive prerequisite that the programmes have IT competences and production equipment which is state-of-the-art in relation to the professions in which the graduates will subsequently seek employment.

Funds are set aside for investments in state-of-the-art IT competences and production equipment for the programmes under the Ministry of Cultural Affairs.

Improved further education and continuing training courses

In order to ensure that lifelong learning is also available within the programmes under the Ministry of Cultural Affairs, it should be made possible to pursue further educa-

tion and continuing training courses within the artistic programmes. It is the aim to improve the graduate's competences', in order to improve their employment prospects and meet the demands of the professions for new competences.

Funds are set aside for the development, establishment and operation of further education and continuing training within the programmes under the Ministry of Cultural Affairs.

■ Maritime programmes

Coherence and flexibility

In the maritime area, there is a tradition for establishing programmes to meet any need in the industry. Furthermore, the time and structure-related framework is used as a management parameter in connection with credit transfer between the programmes. There is therefore a relatively extensive supply of programmes, the duration of which has been extended in step with new requirements from the industry, and credit transfer across programmes has become more difficult.

Since 1997, the programmes have been subject to major restructuring. Instead of central content management with focus on the syllabus and examinations, target and framework management has now been introduced. All programmes are now described through aims and targets thus showing the professional competences of the individual programmes. Target management thus makes it possible to look at prior learning to a greater extent than at time and structure, and hereby it becomes possible to create a better coherence between the programmes and more effective courses.

In 2002, the Ministry of Business and Economic Affairs will initiate a review of the total package of maritime programmes with a view to identifying core competences and

finding ways of reducing the duration of the programmes. This will thus form the basis for adaptations of the programmes so that they can be offered in more coherent courses with the possibility for all categories of students to withdraw from the courses at a given time or to continue with further education. In 2003, the necessary adjustments will be decided.

Quality measurement and “taximeter” structure

In the future, all the maritime educational institutions will become private, self-governing institutions receiving “taximeter” grants in line with the other areas of education. The institutions will themselves be responsible for all planning, implementation and evaluation of the programmes and will document the achievement of targets in a formal quality system with external auditing.

The high degree of decentralisation of the responsibility for education and evaluations creates a need for management by incentive, where both the quantity and quality of the production of the educational institution will have an influence on the total grant awarded. When grants are awarded both in relation to the production of graduates and to the relevant professional qualifications of the graduates, the incentive will be maintained so that the institutions provide education in relation to the relevant needs.

First and foremost, this form of management requires a relevant indicator for the quality of the programme. In the course of 2002, the Ministry of Economic and Business Affairs will identify indicators which are to form part of a new quality index. In 2003, the possibility of making part of the institutions’ grants dependent on the index will be investigated.

Academic further education possibilities

In maritime Denmark, around 10,000 people are employed

at sea, whereas approx. 35,000 are employed on land. More and more jobs on land require education at an academic level.

The maritime programmes are of a duration of 5-7 years, of which the longest in level correspond to a medium-cycle higher education programme. Experience shows that a relatively large proportion of the graduates seek employment on land. There is still an increasing demand and a desire for the possibility of further education for these persons up to academic level so that they can continue a career on land instead of having to “start all over again”.

So far, when it comes to further education, it has been difficult, not to say impossible, to obtain recognition of a maritime qualification in connection with further education. It is probably due to this that maritime staff leave the profession, as they have limited career prospects due to the lack of further education possibilities. A consequence of this may, among other things, be that the profession loses experience and knowledge instead of maintaining a strong body of competences.

A basis for academic further education possibilities must be created for persons with a maritime background. In 2002, the Ministry of Economic and Business Affairs will look into the possibility of academic credit for maritime programmes and the establishment of a Master programme in relation to the maritime profession. In this connection, the financial framework conditions will be clarified. The study is to form the basis for a decision about necessary initiatives.

Easier access to vocationally-oriented qualifying adult education

Within the maritime professions, there is a large group of adults with a low level of educational attainment. In order to ensure these persons' continued employment in relation to the needs of the industry, a wide range of target-oriented education and training courses must be organised in the

near future, and they must be organised on conditions which make them attractive to the target group.

The maritime programmes have several qualifying education courses of short duration, which are all organised with young people as the target group. In order to ease the access of the adult group to further education there is a need to organise the education and training courses offered in relation to them, in particular with the right financial support conditions (adult education grand, in Danish SVU).

A package of further education courses for adults is to be organised, including qualifying courses. In connection with the review of the maritime programmes in the course of 2002, the financial aspects of the support schemes must be elucidated. In the course of 2003, the Ministry of Economic and Business Affairs will organise the establishment of the initiatives which have been decided.

■ Basic and further education in the health area

The following topics in relation to improvements of the education system in the health area must be taken up:

- An increased, all-round effort of recruitment and education of more students for the many health education programmes, where there is, or where in the short or long term will be, a shortage of staff in the health sector. A greater emphasis must be laid on management according to need and occupational relevance in the recruitment situation, and proposals should be made for better educational guidance and study supporting measures, among other things with a view to countering dropout and the making of wrong choices.
- Maintenance and strengthening of the practical training in the health education programmes and a closer cooperation between theory and practice in the institutions.

- A broader effort in the basic programmes to ensure among other things the health staff's further use of IT for diagnostics, treatment, communication etc.
- A continued strengthening of the specialist doctor's area, including documentation and clarification of results and effects of the specialist doctors' reform programme through continuous evaluations and quality measurement and development.
- Assurance of continued further education and continuing training for other groups with health qualifications, e.g. nurses.

■ CROSS-CUTTING INITIATIVES

The government wishes to improve and strengthen the education system over a broad front. Parallel with the above-mentioned education-specific conditions, the government therefore wishes to implement a number of cross-cutting initiatives which concern all the areas of education.

Improved cross-sector guidance

An essential action area in the effort to ensure better education is improved educational and vocational guidance. There is a need to create more coherence in and coordination of the guidance given in connection with the transition between basic school and upper secondary education and between upper secondary education and higher education. The effort in this area must ensure a better and more efficient exploitation of resources. Improved guidance must also discourage wrong choices and dropout.

The guidance must be target-oriented in relation to those young people who have the greatest needs. There is to be a better coordination of guidance in the adult education area, and there is a need for a professionalisation of the guidance counsellors. These needs have most recently been mentioned in the "Report on cross-sector guidance - follow-up

to B131” as well as in the OECD’s country note on guidance in Denmark. In order to ensure a coherent cross-sector guidance, the government will investigate in more detail the institutional and organisational framework of this guidance.

The guidance offered will be made more transparent and accessible to the individual citizen. The access to relevant guidance and information about programmes, educational institutions, job prospects on completion of the individual programmes, and about the expected employment prospects, will be made easier. The citizens will have a better basis on which to make choices regarding education and training.

Better access to relevant information is to become a reality through an increased use of IT in guidance. An increased use of IT will mean a possibility to move resources over to groups with a need for special guidance. Here it is a question of young people who need close individual and personal guidance and counselling, which will motivate and qualify them to be able to choose education and training courses or employment. An increased use of IT will also allow for computerised registration for the upper secondary and higher education programmes.

It is also being considered whether or not to change the composition of the National Council for Educational and Vocational Guidance (RUE) and the tasks and resources of the Council.

Finally a new guidance counsellor course will be established which can be used for a number of guidance schemes.

A proposal is expected to be presented to Parliament in the autumn of 2002.

Strengthening of natural sciences in the entire education system

The intake to the technical-natural sciences programmes is

too low. Children and young people have a too limited interest in the subject area, and in international studies Danish young people score poorly in these subjects. This necessitates a unified and target-oriented effort in order to strengthen the natural sciences subjects in the entire education system. The following initiatives will therefore be implemented:

- An analysis group is to draw up proposals for a modernisation of the natural sciences teaching in the entire education system with emphasis on core competences and teacher qualifications
- A conference on natural sciences will be held in connection with Denmark's EU Presidency with a view to enhancing international cooperation
- The role of the business sector in relation to education is to be strengthened and made visible. The focus of attention should be on cooperation with the business sector and on the possibilities of sponsoring, e.g. in connection with the modernisation of class rooms
- A survey should be made of the development of the teachers' competences and need of continuing training with special emphasis on the subject of science in the lower school classes, the development of a new course concept, including IT based courses and programmes for course providers
- The development of new, better and inspiring teaching material-including IT based teaching material
- The strengthening of the natural sciences' research and education through a closer interaction with the relevant sector research
- The establishment of interdisciplinary research schools, in which private companies participate

- The development of new scientific bachelor and master's degree programmes with a high intake and completion rate.

All initiatives are to be implemented in 2002. An evaluation group will compile experience on a continuous basis and assess the achievement of targets.

Greater internationalisation of the programmes

If Denmark is to be among the leaders in the global knowledge society it is of the utmost importance that Danes have the necessary cultural competences to enable them to cope in an international knowledge-based labour market. The education system must to a greater extent be able to deliver the relevant competences which are currently in demand with students and companies. At the same time, it must to a greater extent be possible to get prior learning acquired abroad recognised in Denmark.

A strengthening of the international dimension in education among other things comprises the following topics:

- Openness, guidance and information regarding the supply of education internationally
- The Bologna cooperation and the coming cooperation in the field of vocational education and training
- Lifelong learning.

In order to achieve the Government's target that Danish education and training courses are able to match the best in the world, Denmark has to take active part in international quality development, evaluation and benchmarking.

Denmark must continue to take part in, and to a greater degree, make use of the results of international studies such as the OECD reviews and PISA. In the EU, Denmark is work-

ing on the follow-up to the target report, which is to improve the quality and the efficiency of education systems in the EU. The focus is in particular on an improvement of the basic skills, proficiency, competences and IT knowledge. In addition, Denmark should take advantage of the opportunity to be inspired by international cooperation through good examples from other countries of how education and training can be organised. International cooperation often leads to the result that when it comes to one's own values and functions they are seen in a new constructive perspective.

A higher degree of international mobility for students, teachers and employed people can contribute actively to giving the individual citizen a better education and to enabling Denmark to cope better in the knowledge society.

If Danish students are to benefit to a maximum degree from international education and training opportunities, it must to a greater extent be possible to get results and credits transferred from education received at recognised foreign educational institutions. Danish educational institutions must also be willing to receive foreign students. The institutions must also be encouraged to enter into strategic alliances with foreign institutions, in particular in cooperation with the Danish exchange organisation Cirius, and to participate on a continuous basis in international cooperation. This requires more and better available information on education systems in other countries, including the use of the so-called ECTS system (European Credit Transfer System) and the Diploma Supplement etc.

The Bologna process concerning higher education is proceeding satisfactorily both on European and on a national level. The most important objectives (descriptions of educational structures the Diploma Supplement and ECTS) have been fulfilled by Denmark. Furthermore, in the areas of vocational education and training and labour market training, an initiative has been taken to create the basis for a

strengthened European cooperation on the mutual recognition of vocational qualifications and competences.

Good foreign language competences are not only an absolute necessity in the labour market of the knowledge-society, they are also a requirement, especially if Danish students are to gain access to a rapidly expanding international educational environment. The students must have a command of English at a high level, both oral and written English, so that they are able to communicate appropriately. In addition, there is often a need to be able to express oneself in at least one more main language.

As far as the Gymnasium programmes are concerned, the government would like pupils to have the possibility to acquire competences by completing part of their education abroad and by doing it in such a way that the study visit abroad may form part of their Danish programme without any waste of time. Various possibilities will be studied in order to establish a model for the general upper secondary programmes, which among other things builds on the vocational and organisational experience gained in the previous vocational college model. The vocationally oriented general upper secondary HHX and HTX programmes previously used a model whereby special groups spent a semester of their Danish programme in a school abroad. The teaching was organised according to Danish education regulations, and in this way the study visit abroad formed part of the usual 3-year programme. The scheme required user payment from the pupils for travel and accommodation.

In 2002, the government will present a model for all four types of general upper secondary programmes by which the pupils can complete part of the programme abroad.

Improved recognition of prior learning in the education system

Denmark has, as part of the strategy for lifelong learning, taken the first step towards the recognition of results of

non-formal learning with its further education system for adults. So far, the issue has been regarded from the perspective of the education system, but there is now a greater need for it to be perceived and dealt with on the basis of the needs of the citizens, companies and the different trades.

In the short term, methods must be developed for an individual assessment of competences in connection with the basic adult education programmes (GVU). A common concept for the assessment of competences must be developed which can be used as a replacement for both Individual Assessment of Competences (IKV) and Individual Clarification of Competences (IKA), which are laid down by law. The transparent and coherent system of assessment of prior learning must be used on a broad scale in relation to the labour market training programmes, the adult vocational training programmes and the basic adult education programmes.

Furthermore, methods must be developed in order to assess the suitability of relevant occupational experience as a basis for access to higher levels in the further education systems for adults.

In the somewhat longer term, the following areas should be investigated and prioritised, with emphasis on quality:

- The introduction of general access for applicants who do not have the formal qualifications to have their corresponding prior learning assessed and recognised
- The shortening of courses in the ordinary programmes on the basis of the use of non-formal competences
- The possibility of registering for examinations or having diplomas issued exclusively on the basis of non-formal competences

- The definition and description of subsets of known competences from the education system
- The establishment of documentation schemes in working life, in an interaction with companies' educational planning.

The development work will be initiated in 2002. The implementation will be initiated in 2003.

Increased flexibility and better credit transfer possibilities in the programmes

A flexible education system and good credit transfer systems constitute a basis enabling young people to move rapidly through the educational programmes and thus avoiding double qualifications. In this way one can ensure the citizens' possibilities of lifelong learning. The education system must be able to live up to the recipients' expectations of flexible employees with relevant qualifications and competences. For the programmes under the Ministry of Education, among others, it must be made possible that competences, including admission competences, can be acquired in different ways which may vary from individual to individual. In this context, also the work with credit transfer must be given higher priority with a view to obtaining flexibility and increased mobility in the education system, nationally as well as internationally.

In upper secondary education, there is a need to improve the possibilities of obtaining credit transfer, both in general and in vocationally-oriented upper secondary education. Therefore, a new ministerial order on credit transfer must be issued with broader possibilities of getting recognition of previously completed subjects - or parts hereof.

The new order Executive must build on the principle that pupils who have already completed/passed the same subject at least at the same level, have a legal claim of recognition as in the past, but without a schematic list of what are the

same subjects. Pupils, who have only completed parts of a subject, must have the right to have their wish of recognition dealt with.

Pupils, who have already completed a subject or a course, which in accordance with the aims of the programme can replace another subject or another course, are entitled to have their wish of recognition dealt with by the school. The school must attach its subject-specific grounds for making the decision in question. The basis for the school's treatment of the pupils' wishes regarding recognition must appear in the new order on credit transfer in the form of a description of the procedure. It must lay down requirements both to the school and the pupil and establish a number of criteria for when it is possible to award credits. These criteria must build on the fact that the school's assessment of the competences must be seen in relation to the aims stated for the programme in question.

In higher education, a project has been initiated for the mapping of practice when it comes to credit transfer. The aim of the project is to identify possible barriers for credit transfer and to propose possible solutions.

In connection with the completed reforms of the short and medium-cycle higher education programmes, horizontal credit, i.e. credit for the same programme completed at different institutions all over the country, has been established through formal rules. Formal rules regarding credit transfer also exist in university education programmes.

The principle of deciding centrally regarding horizontal credits will be systematically pursued in connection with coming reforms, reviews of existing and development of new higher education programmes. The credit transfer possibilities must furthermore be strengthened in those cases where a student has interrupted a study programme or completed a study programme and wished to start a new one.

A new Executive ministerial order on credit transfer in

upper secondary education will be issued in 2003. For the higher education area, a situation report will be drawn up in 2002 on the credit transfer practice in the institutions, and this will be followed up on in 2003.

Improved educational achievement through the use of IT

In the past few years, the educational sector has invested significant sums in IT both in equipment and in the continuing training of teachers. Good progress has been made within the different programmes when it comes to learning to use IT. The next steps will be to reach the result that IT becomes the pupils'/students' personal tool so that they can use IT for learning. An effective pedagogical use of IT will, in addition to the possibility of strengthening the level of the teaching, also give a better possibility of organising the teaching flexibly and getting better access to teaching at a high proficiency and competence level. IT also provides easy access to the significant learning resources that can be found locally, nationally and internationally. It will contribute to strengthening the level of the teaching, subject to the necessary quality assurance of the contents.

Through an increased differentiation, IT must support individual learning both for strong and weak pupils. All users of the education system must gradually learn to use IT at examinations. The experience gained up till now with IT based examination papers must form the basis for the elaboration of new examination forms.

Apart from including a continued integration of IT in the teaching, the initiatives should consist in net-based knowledge sharing systems for both administrative and pedagogical purposes as well as the development of flexible e-learning through pilot-projects and the dissemination of examples of "best practice".

Furthermore, the government will promote the development of internet-based teaching materials and focus on the

use of IT at examinations, and in particular on the development of new examination forms, which are to take advantage of the potential of the information technologies in both the content and form of the examinations. The focus must moreover be on the head teachers' use of IT in an offensive development strategy. Finally, a strengthening of the e-learning possibilities must provide a much greater flexibility in the supply of programmes, independent of time and place.

The work will be initiated in 2002.

Danish for adult foreigners

Greater efficiency and flexibility must be ensured in the teaching of Danish as a second language to adult foreigners.

Against the background of the government's target of a significant increase in the employment of foreigners, the government wishes to optimise the municipalities' integration of foreigners with a view to a more rapid affiliation to the labour market and self-support. It is therefore proposed that the teaching of Danish and its financing is made more efficient, among other things by placing a larger part of the teaching in companies.

The Danish teaching at the language centres must not hinder the foreigners in getting a job. The important thing is coherence between teaching and the practical use of the language at the place of work. It is among other things required that the planning and organisation of the teaching be carried out more flexibly and be individually adapted to the teaching needs of the individual and the company. At the same time, it is a prerequisite that the many years of experience with the learning of Danish, both basic, general Danish and technical language, is maintained and developed.

Quality and proficiency must be ensured and developed through an interaction between on the one hand the par-

ticipant's practical use of the language and on the other hand the teaching. There is a basic assumption in the proposal that greater motivation and the opportunity to acquire Danish will be provided by sending foreigners out to a Danish work place together with Danish colleagues who will make an effort to integrate them.

This makes certain demands on Danish language teachers and the language schools to establish teaching in the companies. The Danish language teachers must be able to combine teaching in general language proficiency and teaching in technical language in the company and perform continuous evaluations of the language proficiency as well as prepare the individual for the final centrally organised language examinations. Cooperation is to be established between companies on joint language classes, the establishment of teaching in smaller classes, and greater use of IT and net-based teaching.

A working group has been set up which is to come up with proposals by the end of 2002 on how the teaching of Danish can become more efficient.

Entrepreneurship culture in the education system

Innovation and entrepreneurship can contribute significantly to economic growth in Denmark. A positive attitude towards innovation and entrepreneurship is therefore of central importance to the labour market. The education system must contribute to creating a positive attitude towards a culture which encourages innovation and entrepreneurship. This must be carried out openly and in a dialogue with companies and organisations etc. The openness may for instance be created through exchange schemes between educational institutions and private companies, project cooperation, mentor schemes, the involvement of business people in the evaluation of work carried out by pupils and increased research in entrepreneurship and innovation etc.

The entrepreneurship policy in the area of education is anchored in the special competences of the individual areas of education, including the subject-specific and pedagogical methods which are characteristic of the field.

The new initiatives in the primary and secondary areas must not be in the form of actual entrepreneurship teaching, but in upper secondary education they may be in the form of project work or other forms of learning and teaching which may encourage the pupils' independence, initiative and future ability to participate in innovation and entrepreneurship projects. The teaching may be related to everyday issues, preferably typical of the companies in the local community. In order to further inform and offer guidance about the possibilities of becoming an entrepreneur, a number of visits will be organised to Gymnasiums, business and technical colleges in the school year 2002-2003.

In the field of higher education, development work is being carried out with a view to increasing the information concerning the application of research results for business purposes as well as a strengthening of the interaction between the business sector and the educational institutions. In the university field, new educational courses within entrepreneurship and innovation are expected to be initiated, and they will be based on a greater research effort in the area.

These efforts must however not be too narrowly defined. There is entrepreneur potential to be found within all groups of pupils, at all levels and within all programmes, and with a target-oriented effort it will be possible to develop entrepreneurial skills. In the autumn, the government will publish an action plan entitled *More Entrepreneurs*, which among other things will deal with the area of education. The action plan is an initiative under the government's growth strategy, *Determined Growth*.

Better institutions for better education

In order to meet the government's expectations for better education in the areas covered by the Ministry of Education, it is necessary that the educational institutions live up to the accepted standards of proficiency and competences; that they make an efficient and target-oriented use of resources, and that they are financially sustainable as well as regionally accessible.

Better institutions are therefore a corner stone of the government's educational policy of better education. In continuation of the presentation of this report on *Better Education*, the Ministry of Education will issue a special publication on better educational institutions, which will make an in-depth account of the particular institution-policy initiatives in relation to the Ministry's educational institutions.

The educational institutions must be strengthened by improving the basic prerequisites, structures and framework conditions and by improving the possibility of a better and more target-oriented use of the resources, including output management incentives. The institutions must have freedom with responsibility.

Together, the initiatives are to give the educational institutions prerequisites, tools, responsibility and a degree of freedom so that they are able to meet the new requirements for increased quality and competence. A consistent reorientation must be carried out in order to create a coherent and development-oriented management concept with focus on principles of self-management and which includes: a further development of the financial management; a strengthening of the institutional structure, in particular in the vocationally-oriented area of education; a realisation of the requirements for greater transparency and openness; a strengthened basis for an optimal use of the resources; a special use of teaching resources as well as management development.

The initiative *Better institutions for better education* amplifies the following institution policy initiatives:

- Further development of the financial management system so that it will to a greater extent promote the objectives of the institutional structure and contribute to the development of the quality of the programmes; and further development of the “taximeter” system
- Regional educational institutions with increased self-management. Adaptation of institutional structures and regulation of courses supplied with a view to creating regionally strong, flexible and less vulnerable educational institutions. A one-stranded institutional structure will among other things be established between AMU centres and vocational colleges, and the vocational academies (short cycle-higher education programmes) will be further developed
- Transparency and openness: output indicators. Further development of output indicators in order to render them visible to stakeholders as an incentive to improve institutional and educational quality
- Pedagogical methods and flexible organisation of the work. The teachers must to a greater extent focus on the teaching of the individual pupil and on those skills which the individual pupils should acquire through his or her course of education. This requires a flexible organisation of the work and a chance to use a broad spectrum of pedagogical methods
- Good management. Those responsible for the running of an institution must be able to make use of all necessary management tools. Demands must therefore be made on them when it comes to education policy management, pedagogical management, staff policy management, financial management and administrative management.