DOCUMENT RESUME

ED 345 417 EC 301 178

AUTHOR Van Boxtel, Herman
TITLE Gifted Children and Adolescents--Research and Education in Europe. Final Report by the General Rapporteur on the Educational Research Workshop (Nijmegan, The Netherlands, July 23-26, 1991).
INSTITUTION Council of Europe, Strasbourg (France).
PUB DATE 10 Oct 91
NOTE 15p.; For a related document, see EC 301 177.
PUB TYPE Collected Works - Conference Proceedings (021)

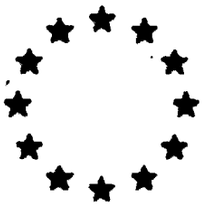
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Acceleration (Education); Comparative Education; Educational Environment; *Educational Needs; Elementary Secondary Education; Females; Foreign Countries; *Gifted; Individual Differences; Instructional Development; Mainstreaming; Needs Assessment; Research Needs; Special Classes; *Talent; Teacher Education; Workshops
IDENTIFIERS *Europe

ABSTRACT

This final report summarizes results of a 1991 conference of an Educational Research Workshop on gifted children and adolescents held by the Council of Cultural Cooperation. The report identifies major points from the keynote papers and then summarizes the discussions of the working groups. The contents of the keynote papers and the discussions are then integrated and conclusions drawn. Finally, 10 recommendations are made. Key ideas of the keynote papers (by Pieter Span, Kurt Heller, Joan Freeman, Andrzej Sekowski, Laurence Reiben, Ake Edfeldt, and Candido Genovard) include the following: capacity definitions of giftedness are out of date with performance oriented models gaining acceptance; multiple information sources and measures are recommended for identification; services within the regular school system are usually preferable to special schools and classes; and legislation and services need to respect individual differences. The 10 recommendations address: the importance of individual differences, the special problems of gifted females, provisions within the regular school system, instructional development, teacher training, acceleration, special classes, research needs, and parents' associations. (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Council of Europe
Conseil de l'Europe



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

ED345417

Strasbourg, 10 October 1991

DECS/Rech (91) 76
Or. Engl.

COUNCIL FOR CULTURAL CO-OPERATION

Educational Research Workshop on gifted children and adolescents - Research and education in Europe
Nijmegen, 23-26 July 1991

FINAL REPORT BY THE GENERAL RAPPORTEUR

Drs. Herman VAN BOXTEL
Faculteit der Sociale Wetenschappen,
Rijksuniversiteit Utrecht,
Postbus 80140, NL-3508 TC UTRECHT

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Michael Verbeek

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FL C 301179

The author wishes to acknowlege the important substantive contribution of Franz J. Mönks to the preparation of this report. The assistance provided by M.W. Katzko in editing the manuscript is also appreciated.

BEST COPY AVAILABLE

This document will not be distributed at the meeting. Please bring this copy.
Ce document ne sera plus distribué en réunion. Prière de vous munir de cet exemplaire.

In this Workshop seven commissioned papers were presented in plenary sessions. Key issues, raised in these papers and presentations were discussed in a number of sessions by three different working groups.
In this final report some major points from the keynote papers are presented, followed by a summary of the discussions of the working groups. The contents of the keynote papers and the discussions are then integrated and conclusions drawn. Finally, based on the results of this Workshop several recommendations are made.

1. The keynote papers

In his contribution, **Pieter Span** concludes that in The Netherlands there is clear agreement that giftedness can only be identified after the production of outstanding achievement and only by specialists in the field. In the opinion of some researchers the concepts of 'giftedness' and 'expertness' coincide. This point of view makes it difficult to call children and early adolescents gifted since they have lacked the time to become an expert. Instead, the concept of 'highly able' children is introduced. These children can be identified by their rapid cognitive development, their precocious knowledge base, and their outstanding metacognitive skills. These characteristics are seen as favourable for the development of gifted achievement, and are all open to testing.
An earlier model of giftedness, based on the ideas of A.D. de Groot, with giftedness heavily dependent on general intelligence (with creativity and motivation as inherent aspects, and seen as a natural potential largely due to inheritance) is no longer regarded as valid. Instead, researchers focus on other personality characteristics, such as creativity, divergent thinking skills, intrinsic motivation and task commitment, self confidence, as well as on other factors such as determination, persistance, and many, many hours of training and dedicated practice, as being necessary conditions for the emergence of gifted behavior. Very fruitful research has examined the behaviour of expert-novices, emphasizing metacognitive skills.
As a matter of fact, not viewing intelligence as a static and inherited personality trait opens the door for the possibility of stimulating and encouraging the development of gifted achievement by the environment. The important role of social settings, such as the family, the school, and the peergroup, is emphasized in the work of Mönks and his collaborators.
In practice, attention for giftedness began in the sixties, but was interrupted in the seventies. In the eighties, renewed attention resulted in a number of research projects. The findings of these projects suggest that both traditional intelligence tests and teacher nomination are unreliable identification instruments, that there is great need for enrichment materials and teacher training, and that gifted underachievers have very negative attitudes toward themselves and the school.
At present, there is a clear preference for teaching the gifted in mixed-ability classes in The Netherlands. Unfortunately, teachers are inadequately trained and enrichment materials are insufficient. These are problems that should be tackled immediately. In the meanwhile, the best alternative is streaming in secondary education.

In contrast to Span's purely national focus, **Kurt Heller**, tries to give an overview of the international state of giftedness research. Nevertheless, his conclusions are remarkably similar to those of Span.
First, taking excellent performance in adulthood as a point of departure, Heller concludes that its individual and reliable long term prediction from childhood is extremely difficult, if not impossible. The main reason for this is that we try to predict area specific performance on the basis of relatively general assessments of ability (i.e. IQ-tests most of the time). In fact, the relative significance of general intelligence potential for explaining performance variance decreases with progressing age, whereas elaborated area specific basic knowledge for explaining expertise becomes increasingly more powerful.
In attempting to determine and to explain the conditions which are favourable for the development of gifted behaviour, a central position is given to the analysis of the specific

BEST COPY AVAILABLE

characteristics of the learning and performance behaviour of talented persons, and of the higher cognitive competencies (i.e. metacognition) that are assumed to be responsible for outstanding performance. Other parallels with Span can be found in the emphasis placed on divergent thinking processes, spontaneity and quick thinking (creativity), together with intrinsic achievement motivation and persistance. Moreover, these personality characteristics should be considered as the result of interactions between individual and sociocultural determinants, and which are to be examined in system-theoretical models of giftedness. Culture-comparative longitudinal studies deserve particular emphasis from this perspective.

In the eighties, a large number of basic and applied research projects were started/completed on (among others):

- the development of measurement instruments for identifying gifted children and adolescents;
- aid concepts inside and outside the school;
- social conditions and sex-specific differences;
- technical creativity and technological assessment;
- a variety of questions in cognitive psychology;
- cross-cultutal studies in cooperation with China and the USSR.

Nevertheless, many topics have still been insufficiently investigated. In particular, the lack of basic research in the field of cognitive competence often makes applied research difficult.

In practice, support measures are directed predominantly towards enrichment. Acceleration approaches can be found in mathematics and occasionally in language, music, and sports. In the future, special attention has to be focused on:

- the development of talent-specific curricula;
- (advanced) training of teachers;
- training of school counselors, school psychologists, course and career advisors;
- the identification of and individual support for gifted children and adolescents.

Joan Freeman draws attention to the fact that in Britain a National Curriculum has for the first time been introduced. A possible risk of this policy is that the potential of children who could work beyond the expected attainment levels would not be fully developed.

With respect to education, there is no specific governmental policy for the gifted; nonetheless, interest appears to be growing. There is a preference for teaching the gifted in the regular classroom. The British school system has a number of characteristics which make it well suited for the gifted:

- flexibility in curriculum;
  thinking skills are trained by frequently writing essays;
- early school start: early reading and writing;
- efficient use of travelling specialist teachers (peripathetic teachers);
- there are many out-of-school extra's such as competitions, school orchestras and so forth;
- the school system is highly selective by implicit selection procedures in society;
- higher education is free.

Some very selective private schools could be viewed as schools for the intellectually gifted, although not originally founded with that objective. There is only one private school with a special curriculum for the gifted, and another one will be opened next year. On the other hand, there are several schools for special talents, such as music and performing arts. Acceleration, especially in the remaining grammar schools, is not uncommon.

Most research work on giftedness in the UK has been undertaken in the form of surveys. Some examples:

- teacher predictions for bright pupils;
- underachievement in gifted working-class boys;
- social influences on competence and achievement of the highly able;
- biographical determinants of musical excellence;
- Freeman's own well known longitudinal study (the Gulbenkian Project).

Provision for the highly able include:

- in education higher level thinking skills and effective problem solving are clearly promoted; there are workbooks for teachers and highly able pupils, especially in thinking skills;
- remediating highly able pupils with learning difficulties;
- the National Association for Gifted Children (NAGC), formed by parents, is active in running weekend educational enrichment sessions and summer schools;
- the National Association for Curriculum Enrichment and Extension (NACE), formed by teachers, has the aim of providing extra help for the highly able in normal schools;
- there is a number of private foundations and privately funded national competitions which are especially working for the gifted.

Andrzej Sekowski's contribution addresses the problems of gifted education in the countries of Mid-East Europe in general and Poland in particular. The political system and ideology did not have a positive influence on gifted research field or on educational work with gifted children in post-war Mid-East European countries. Unfavourable economic conditons and negative social attitudes are other factors which had a negative effect on interest in provisions for the gifted. At present, the author notes that attitudes are moving in a less negative direction.

Especially girls suffer from these negative conditions: in these countries sex seems to constitute an even greater barrier than it is in other European countries. Stereotyped judgement plays an important role. Although there are no limitations of an organizational nature which restrict the chances of girls for a successful professional career, the existing psychological barriers are often more difficult to overcome. Chances for girls are particularly unequal in mathematics and the natural sciences.

Basic research is primarily concerned with the nature of intellectual and creative gifts (creative and divergent thinking), cognitive style, and psychosocial conditions. There is some emphasis on the role of the sociocultural environment (especially the family), and on social functioning of the gifted. Sekowski calls special attention to the research on the gifted disabled; although it is valuable in its own right, it is fruitful for the gifted research field in general.

In Poland, gifted children are supported with scholarships from the Polish Children's Fund. They are allowed to follow individual programmes, to have contact with eminent scientists, and to participate in academic classes. However, they are not seperated from their own social environment, but are included in the regular educational schedule. The educational process is intensified through their participation in summer camps, where the objectives are the development of particular special gifts on the one hand and general psychological development on the other.

The education of gifted children in schools for the arts (music, fine arts) is very succesful in Poland, as it is in most other Mid-East European countries. Special program schools are also available for mathematics, physics, and language and literature.

Special attention is given to the problems of gifted individuals from large rural areas.

The importance of East-West cooperation is stressed, both on a theoretical and practical level. On both levels a particularly useful contribution can be expected in identification and diagnosis.

BEST COPY AVAILABLE

Laurence Rieben discusses the situation in both France and Switzerland, task made difficult by the heterogeneous situation (26 cantons in Switzerland with autonomous educational systems). An overview, partly based on a questionnaire, shows an almost complete absence of research in the field of giftedness in both countries.
The author defends the theoretical point of view that the development of gifted children can be explained in terms of general developmental models, provided that they include an explanation of individual differences. A crucial theoretical problem concerns the dimensionality of the models: do they have to be to considered as multi- or as unidimensional (g-factor)? The author prefers multidimensional models which define intelligence in terms of relatively independent components, which allows the possibility of several different profiles and developmental 'routes'. The question whether gifted children can be characterized by a prevalence of abnormal dissynchronicities in the development of these profiles (stressing the disharmonic or even pathological aspects of giftedness) is answered negatively. In the opinion of the author, much of this dissynchronicity, if present at all (in a higher degree than in the non-gifted population), can be attributed to the absence of adequate education adapted to the potential of gifted children.
Regarding the schooling of intellectually advanced children, the author discusses the fairly common practice in France and Switzerland of early entrance and skipping a school year after psycho-pedagogical examination, particularly in Geneva. This practice is considered as a suitable for most of the children passing the examination, but not really sufficient solution.
As a solution for the future, Rieben makes a plea for differentiated education. She mentions a number of prerequisites:

- development of an adequate differential psychology of education;
- development of know how and technical means for identification of relevant individual differences within the classroom;
- encouragement of more flexibility in teaching approaches.

Such a solution appears to be taking form in France, allowing children to advance within a given course and within a class without having to skip a grade (the socalled 'cycle system').

For ideological reasons there are no special educational procedures for specially talented school children in Sweden, at least since 1968. **Åke Edfeldt** discusses briefly the backgrounds of this -- as he sees it -- regretable situation.
The main part of his contribution is devoted to the immense importance of the parent's basic child-oriented efforts:

- most importantly during the early years;
- during the whole schooling period;
- by evoking intellectual interest and curiosity;
- learning the first lessons in basic problem solving.

He illustrates his point of view in terms of the process of learning to read. Quite a number of succesful gifted individuals seem to have learned to read at a very young age, even before formal school entrance. He explains that learning to read naturally takes place in an analytic way. Helping the child in its first efforts requires no formal training and can be done by attentive parents and caretakers. Analytically learning to read keeps the child free from the mechanisation of the synthetic school training in reading. It makes reading a true instrument for communication and thus for development as well.
In this sense, Edfeldt concludes that early learning to read (in an analytic way with the conctructive help from parents and caretakers) can lead to academic prowess.

Candido Genovard reviews a number of research projects carried out in Spain since the beginning of the eighties. As major findings of these project the author mentions the following:

- the gifted subject (in homogeneous classes) is able to advance some twenty school months during the nine months of the school year;
- prerequisites for a firm diagnosis of the gifted are objective measures of all the functions that determine or influence succes in school;
- gifted students (partly from unfavourable home environments) seem to profit from the following (combined) provisions:
  - half-board,
  - homogeneous groups in primary schools,
  - quarterly supervision of performance by objective tests;
- the Renzulli rating scales for the behavioral characteristics of superior students appear to be efficient instruments for detecting students with high intellectual capacity.

In Spain the following organizations in the field of giftedness exist:

- the Research Team for Gifted Children (EINNS);
- the Association for the Development of Creativity and Talent (CREDEYTA).

Legislation allows gifted children to combine two school years in one or to skip a school year on the basis of an educational psychologist's report.

2. The group reports

Three groups, one English-speaking, one German-speaking, and one mixed group (using the simultaneous translation facilities) were constituted at the start of the Workshop. In four working sessions, approximately eight hours of discussion were devoted to a number of topics. There had not been a list of topics and questions defined in advance to be examined by all the groups, although for some topics this did occur (such as the need for special teacher training).

The need for special attention for the gifted

Children differ in many aspects (for example rate of development, learning potential and learning speed, interests and motivation, special gifts and talents). Educational systems need to respect this extreme diversity and have the obligation to approach children in an individual way. It was noted that most countries in Europe have a fairly rigid school system, with school entrance and progress determined only by date of birth. Most educational systems do not treat each child as an individual and do not offer provision for the fullest possible development of each child's individual potential: "Educational legislation must recognise and respect the fact that children are different. The school system is to serve the children and not the other way around. If one of the two is to survive, it should be the child rather than the system".

Definition of giftedness

Little was said in the groups about what is in fact a gifted child. In the German-speaking group some alternatives were offered. One can define giftedness relative to the age group in question (the 2 or 3% highest scores on any identification instrument), one can take acquired expertness as a point of departure (problem: how to identify gifted children who did not have the time to become experts? Compare the contribution of Span), or one can apply subjective norms in a life span approach.
The lack of agreement on what constitutes giftedness poses a serious problem. One has to formulate a definition of giftedness before being able to identify the individuals who possess those qualites. Apparently, these difficulties were avoided by not explicitly discussing them, and/or the participants reached consensus on the subject they were talking about in a very implicit manner (which often is the case in discussions among experts).
However, there is one conclusion which can be drawn with certainty: giftedness is a multidimensional concept. In one group, a whole canon of aspects of giftedness was presented: cognitive abilities, creativity, communication abilities, learning strategies, social-moral abilities, self confidence, and the like. Although such a list does not clarify the definition problem , it makes clear that simple classical extreme IQ-definitions are no longer tenable.

Identification and diagnosis of giftedness

Without an explicit definition of giftedness, identification of gifted individuals is a difficult task. Even when we have a clear idea what it is that we want to identify, we still encounter a lot of practical and methodological problems.

First, it should be noticed that the identification strategies and procedures applied in the various countries of Europe show "enormous variety of methods and objectives". This variety seems to imply that the decision on what procedures and instruments to apply is dependent upon the existing situation in the educational system. This means that these procedures and instruments cannot be transferred without adequate knowledge of the conditions under which they are applied in other countries.

Second, until now much emphasis is put on the measurement of quantitative factors. This is even the case with characteristics such as creativity (for example in terms of the number of possible solutions offered for a problem), which might more appropriately be operationalized in terms of qualitative indices. There is a great need for the development of such qualitative indices.
Third, there seems to be agreement that all possible information should be gathered on all the relevant factors from as many different data sources as possible (parents, teachers, school psychologists, perhaps even peers) and by using a variety of instruments. In doing so, checklists and nomination procedures should be handled with discretion, as is the case with the administration of objective tests. Process and action oriented information is highly valued, in contrast to static status information. Identification of the gifted should be dynamic and continuous in nature.
Fourth, a number of relevant characteristics of the gifted can only be established when adequate learning situations are provided. This is especially true for such factors as creativity, originality, divergent thinking skills, interest, and motivation. The latter are hard to assess in standard testing situations and have to be evoked in regular classroom situations. Many teachers still need a lot of support to organize such learning situations. Furthermore, seemingly trivial information can prove to be of utmost importance, for example leisure time activity.
Fifth, the problem with many objective tests is how to fit them in regular school and classroom procedures, as well as the considerable cost of using them. Perhaps more emphasis should be placed on teacher training. Teachers should be made aware of the relevant characteristics of the gifted, thus making identification an ongoing classroom assessment and evaluation process, rather than a one-shot formal procedure.
Sixth, identification does not start at formal school entrance. As suggested in one of the groups "parents need to learn more about the early stages of child development in order to help them recognise signs of high potential". This does not mean that they have to be able to label their child as gifted or not. They have to learn to be sensitive and responsive in order to adequately foster learning and development (compare the contribution of Edfeldt).
Seventh, in identification procedures factors such as gender, belonging to ethnic and cultural minority groups, socio-economic background, and the possibility of learning disablities should be taken into account.
Finally, the need for more basic and applied research in the field of identification of the gifted is explicitly stated in all three groups. More collaboration between researchers and practitioners will be fruitful, not only in identifying the relevant questions to be addressed but also in putting research results into practice: "There is a need to bring together methodological know-how, pedagogical understanding, and practical support".

Provision for the gifted inside or outside the regular school system?

Having accepted the right of all individuals, including the gifted, to adequate educational provision (in the sense of fully developing his or her potential), how can adequate provision for the gifted be put into practice? In the working groups a wide variety of possible measures were discussed and proposed. These proposals ranged from out-of-school enrichment activities, enrichment in mixed-ability classes, in-depth study of subject matter, via acceleration and streaming to special curricula, and special schools and classes for the gifted. All these proposals "are considered more favourable than uniform teaching for all".

Yet, meeting the needs of the gifted within the regular school system seems to be preferred by the majority of the experts. Regarding the possibilities of teaching the gifted within the regular school system there is a further preference for **teaching the gifted in mixed-ability classes.** However, such a choice has important consequences. First, a flexible curriculum is a necessary condition. However, in many countries in Europe curricula are fairly rigid, in fact too rigid to effectively match a great number of different teaching and learning styles (see also the contribution of Freeman on the characteristics of the British "open system").
Second, working with the gifted in mixed-ability classes assumes internal differentiation, which is in fact individualisation. To make individualisation work a number of suggestions were made:

- let pupils work at their own speed and rhythm;
- let gifted pupils make decisions in choosing learning materials and working methods;
- autonomous learning processes (independent learning) are considered very important.
- choose learning methods which stimulate motivation, create a stimulating environment;
- let classroom activities link up with leisure time activities;

Third, differentiation and individualisation means more than many teachers realize: "There needs to be a greater understanding about the variety of ways of differentiating work for pupils of different abilities". They also presuppose a great deal of practical knowledge and skill. Adequate teacher training seems indispensable (see below). Furthermore, team teaching and carefully managing the teaching and non-teaching staff is considered necessary in many instances.
Fourth, working with the gifted in mixed-ability classes can mean different things. One can choose to strenghten their strong points (preference model), one can choose to work on their weak points (remedial model), or one can choose to strenghten the strong points to compensate for weaker points (compensatory model).
Finally, it is recognised that working with the gifted in heterogeneous groups generally has a beneficial effect on the total group or class: "It can make an impact on a wide cohort of pupils...the standards are raised for all children".

There is a variety of other possibilities to work with the gifted within the regular school system. Alternatives discussed were acceleration, streaming, and special classes.
Acceleration is possible within a heterogeneous group of pupils (compare the French 'cycle system', as described by Rieben). To accomplish this goal that pupils be maintained within the same group, some combination of acceleration and enrichment has to be organized. Good examples are the socalled pull-out models, allowing gifted children to work a certain amount of time outside the regular classroom.
Alternatively, acceleration can take the form of early school entrance, and/or grade skipping, a common practice in a number of countries. All the groups warned against the possible adversive effects of placing gifted pupils outside their normal age group. When such a form of acceleration is considered for a gifted pupil, a careful decision is needed, taking into account the whole social context, the willingness of the pupil, the opinion of the parents and the judgement of teachers and other experts. The same warning applies when placement in **special classes** is under consideration. Furthermore, teaching gifted pupils in isolation from their normal peer group may have negative consequences.
In many European countries **streaming** (placing pupils in more or less homogeneous groups) is often one of the few existing possibilities to meet the needs of the gifted, especially at the secondary level (compare for example the situation in Germany and The Netherlands; contributions of Heller and Span). It is noted that homogeneous groups often tend to become heterogeneous groups in the long run, so that solutions in terms of for example internal differentiation are as yet necessary. Another problem with streaming is that experts do not agree on the 'ideal' moment for such a form of external differentiation.

BEST COPY AVAILABLE

Regarding the possibility of special classes, and particularly **special schools** for the gifted, most experts at the Workshop (as is the case for practitioners in the field of education) were very reluctant to adopt this alternative. The problem mainly concerns the social integration of gifted individuals. Teaching the gifted in isolation from their peer group could be harmful for their overall, and particularly social and emotional, development, if not properly managed. Furthermore, there exists a relation between optimal development of the gifted and the interests of society. In this regard, the gifted should be allowed and urged to accept social responsibilities.
A distinction has to be made between general academic giftedness (as it often is assessed by means of general tests of intelligence, exceptional academic achievement, or both), and special gifts and talents. Special schools for exceptionally talented children and youngsters in very specific talent domains (such as music and performing arts) are viewed positively in a large number of European countries. There is greater reluctance to adopt special schools for individuals with exceptional general academic capacities, particularly at the elementary level. This does not exclude the possiblity that in certain ideological, educational, political, and economic circumstances such special schools may be appropriate.

The necessity of adequate teacher training

In the summary of discussions on teaching the gifted in mixed-ability classes, reference has already been made to the need for adequate teacher training. Teacher education and training was considered vital by all the working groups. It has the highest priority among the measures to be taken. So, a great deal of discussion was devoted to this subject, as was the case during the Vienna Summit of the World Council for Gifted and Talented Children in 1991, discussing the first stage of a strategic plan (see the Summit Report by Norah Maier).

In teacher training, one has the choice between selecting and training a special group of teachers interested in working with the gifted on the one hand, and attention for the problems of gifted education in the training of all teachers on the other hand. The latter is clearly preferred in all the groups: all teachers will, as a matter of fact, have to work with gifted children, so differentiation strategies (enabling teaching the gifted in mixed-ability classes) should be an essential element of all initial teacher training. In most cases, initial teacher education was and is very limited, if not totally absent, so in-service training programmes are needed. It was stressed, that "such training needs to be carried out by those with both enthusiasm and expertise in the field of gifted education".
Important topics to be treated in both initial and in-service teacher training programmes that were mentioned:

* Awareness of the immense individual differences in, for example learning speed, depth of learning, and learning style, and the consequent needs of gifted children. Any negative images of giftedness, if already acquired, should be dispelled. Special attention should be paid to social stereotypes regarding the traditional role of women in relation to giftedness.
* Attitude change: "to meet the needs of the gifted, teachers must have an open mind, high self esteem, know their limits, be willing to learn together with the child, to favour independent learning, be motivated, and focus on the learning rather than the teaching process".
* Knowledge, insight and skills in a variety of strategies of differentiation, broadening the teachers' repertoire of choices for individualised educational care.
* Learning different teaching styles, and learning to effectively match different teaching styles and different learning styles.

Finally, all the groups emphasised that there should be closer cooperation between researchers and teachers. The complaint is often made that results of applied research are hard to put into practice, and that research projects in gifted education only have an influence in the institutions in which they are carried out. Results can and should be disseminated through in-service teacher training programmes.

3. Integration of findings and conclusions

Theory and fundamental research

The number of existing models of giftedness is immense and continues to grow. From this Workshop one gets a good impression of the difficulties in defining giftedness. Yet it is possible to draw some conclusions:

- Capacity definitions of giftedness are out of date: conceptions of giftedness as being an extremely high score on some general test of intelligence are no longer seen as acceptable.
- Performance oriented models are gaining wide acceptance: outstanding performance has become the point of departure, sometimes equalizing 'giftedness' and 'expertness'. For such performance, more is needed than extremely high convergent thinking skills traditionally measured by general intelligence tests.
- Research is focusing on the role of other intra-individual characteristics which can be seen as preconditions for outstanding performance, such as:
  - creativity and divergent thinking skills;
  - intrinsic motivation and task commitment;
  - self confidence and determination;
  - persistence, hard work, and dedicated practice.
- In no longer viewing intelligence as a static personality trait determined largely by inheritance, it is now possible to view gifted performance as a matter which can be influenced by the environment. The importance of social settings, such as the family /parents, school, and peer group, has increasingly been stressed in the last decade and throughout this Workshop.
- One has to avoid the danger that outstanding performance is too heavily interpreted in terms of **academic performance** alone. Other modalities of giftedness (e.g. social, musical, artistic, psychomotor, linguistic) deserve equal attention, all the more because formal educational systems seem to be incapable of adequately handling these forms of giftedness.

Identification

Many problems concerning the identification of gifted children have been reported in this Workshop. To mention a few:

- Traditional intelligence tests are regarded as unreliable and of limited importance.
- In several research projects teacher nomination or teacher ratings also seemed unreliable.
- The assessment of creativity and divergent thinking skills poses many problems.
- On the one hand several questionnaires and checklists appear to be suitable; on the other hand they need to be handled with discretion.
- Only quantitative measures are available; there are very few qualitative approaches.

Generally, all available information with regard to all the relevant characteristics has to be gathered based on as many data sources as possible, using objective and subjective information as well.

Status information seems to be less important than process or action oriented diagnostics.

The question remains how formal identification strategies can be brought into the school and classroom. As one of the discussion groups pointed out, they might be out of date. Instead, to cite this group, "teachers need to be more reflective, adopting a technique of ongoing observation and using a repertoire of assessment and evaluation processes, in order to build up a profile of the child".

Provisions for the gifted inside the school system

With regard to the question whether nurturing the gifted should take place within the regular school system, or in special schools or classes, the predominant opinion in the Workshop appears to favour the regular school system. A variety of possible solutions were proposed. To mention the most important ones:

- internal differentiation,
- enrichment,
- more flexible arrangements and programs, so that regular contact with classmates is provided on the one hand, and activities and courses not related to age are possible on the other hand.

All these measures assume at least the following prerequisites:

- Adequate differentiated curricula and enrichment materials have to be provided. A great lack of these materials was repeatedly noted throughout the Workshop.
- Teachers have to be adequately trained.

The group discussions devoted much attention to a variety of problems related to **teacher training**. To sum up:

- Teachers have to be made more sensitive to individual differences in
  - * learning rhythm and learning speed;
  - * learning styles;
  - * specific capacities and limitations;
  - * specific needs and interests.
- Flexible teaching styles are needed.
- Teaching styles and individual learning styles have to be carefully matched; good relationships between teacher and learner are crucial in this respect.
- Many teachers have a limited view of what is meant by differentiation.

Differentiation has to be an important element of all initial teacher training. In most countries, this seems not to be the case. Additional in-service training programmes are thus essential. To be effective, such training needs to be carried out by those with both expertise and enthusiasm in the field of gifted education.

Results of applied research can and should be disseminated through these in-service courses.

Acceleration in the form of early entrance, grade skipping or express-courses for homogeneous groups of gifted individuals appears to be common practice in a number of countries. These measures often seem to be taken because more adequate possibilities are lacking. Generally, teachers appear to be reluctant to use these measures. In all cases, possible negative social and emotional consequences of these measures need careful consideration. Maintaining contact with the peer group remains important, not in the last place in light of the social responsibility of the gifted. In making decisions for placement, all the involved persons (the gifted child, parents/caretakers, teachers, and other experts) should be allowed to take part.

Special schools and classes also appear to be acceptable in a number of countries. Here, one has to distinguish between special schools intended to meet the needs of students with exceptional general academic capacities (assessed by means of general tests of intelligence, exceptional academic achievement, or both), and special schools for exceptionally talented children in very specific talent domains.
The latter are acceptable in many European countries. That there are so few of these schools per country is related to the fact that these talents are regarded as 'scarcity talents', and not because there is a principled unacceptability. Most often these special schools are for music and performing arts. Special schools for sports, mathematics, sciences, humanities (linguistics) are much less frequent, and if they do exist, it is predominantly in a number of Mid-East European countries, and only at the secondary level.
General schools for the gifted are great exceptions to the rule in all countries of Europe. The general opinion on the necessity of these schools is consistent with their exceptional status: it is fairly negative. Nevertheless, in some countries there may exist political, ideological, and geographical circumstances which make special schools of this kind appropriate.

Provisions for gifted children outside the school system

Responsibility for nurturing the gifted not only lays in the educational system. Responsibility has to be shared by the parents, the educational system, and other relevant institutions in society.

The parents have a very important role, especially in the first years of the child's life. They have to be sensitive to the needs of their children, gifted or not. They have to encourage and stimulate, and offer adequate opportunities for their gifted child. Education for parenthood in general, as an important aspect of secondary education, can be beneficial for the gifted.

As a group, parents of gifted children can do much to offer out-of-school provisions for the gifted. A good example is the British National Association for Gifted Children, which organizes weekend courses and summer camps.

In addition, parents of gifted children, including gifted problem children, need mutual support and recognition.

Some general considerations

The reality of individual differences is not always recognized and respected in legislation concerning the educational system. This seems particularly the case for gifted children. Good education is education which is adapted to the specific needs and capacities of these children. The findings of basic research show that gifted children need a stimulating and encouraging environment to develop to their full potential.
Adequate educational opportunities are not only needed in the light of individual rights, but also in the light of the value of the gifted for society as a whole.
In addition, special attention is needed for the special and unfavourable position of gifted women.

We cannot afford to waste so much valuable talent.

RECOMMENDATIONS

1. Individual differences have to be recognized and respected in legislation. On the basis of individual human rights, gifted individuals need adequate educational opportunities to develop to their full potential.

2. The special and unfavourable position of gifted women and girls needs additional attention.

3. Provisions for the gifted and talented should preferably be arranged within the regular school system in the form of flexible curricula, internal differentiation, and enrichment activities.

4. There is a great need for the development of adequate enrichment activities, special curricula, and learning material for the gifted.

5. Adequate and effective teacher training is essential: differentiation in favour of the gifted should be a core element of all initial teacher training courses and supplementary programmes of in-service training in this area are badly needed.

6. Acceleration in the form of early entrance and grade skipping is acceptable in individual cases in the absence of more suitable measures, provided that it is arranged in agreement between school, parents, and child.

7. Special schools and/or classes for the gifted, in isolation from non-gifted children are -- as a rule -- only to be established for a number of special talents (e.g. music and performing arts). Under certain circumstances, such as for political, geographical or educational reasons, establishing special schools or classes of wider scope for the academically gifted or advanced may be appropriate and desirable.

8. Basic research in the field of giftedness has to be stimulated as a necessary basis for applied research.

9. Applied research is badly needed in the areas of identification strategies and provisions for the gifted; results should be made effective through initial and in-service teacher training.

10. Parents associations and other private initiatives in favour of the gifted should be encouraged.