

Competence and Responsibility

The Third European Conference of
The European Council for High Ability
held in Munich (Germany), October 11-14, 1992

Volume 2

Proceedings of the Conference

Edited by

Kurt A. Heller und Ernst A. Hany



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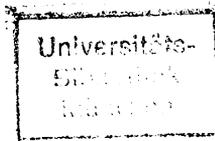
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Foreword

Volume 2 of "Competence and Responsibility" contains the Proceedings of the 3rd European Conference conducted by the European Council for High Ability (ECHA), which was held in Munich, Germany, in October 1992. This conference was intended to provide a state-of-the-art overview of the European research on giftedness and creativity and of attempts to provide differential education to the highly able. The organization of the symposia and workshops allowed a substantial exchange of ideas and practical approaches from both sides of the former "iron curtain", and encouraged discussions and mutual stimulation of European scholars and practitioners and individuals of other continents who shared their valuable experiences with the other participants of the conference.

At the time when we chose "Competence and Responsibility" for being the motto of this conference, we were not aware that the same words were used by a company of chemical industries in their newspaper advertisements. This is not the place to discuss any subconscious effects of advertisement campaigns; instead, we would like to point to the fact that education, politics, and industry are more and more taking a systems view on global issues. If one speaks of competence, this first assumes a set of tasks which requires the competence focused, and second makes a comparison between subjects of different levels of competence. The concept of responsibility expands this perspective of interactive relationships by referring to global values which are accepted by all partners who interact in a system of competences and demands. Based on these premises, first the education of the gifted is conceptualized as a task every society has to fulfill in order to secure both the individual's right of appropriate education and its own progress and second, this education has to aim at developing the gifted's attitude of being responsible for their nurturing society's well-being, i. e. of being obliged to attempting to solve the urgent problems of their decade. The Munich conference looked at this system of mutual responsibility from a psychological and educational perspective. The development of young people's talents and adults' skills by means of education provided by family and school, of psychological treatment, or of the careful design of the work environment, and by means of selecting individuals who fit best to the learning and working settings available were the topics dealt with in most contributions.

More than 400 scholars and practitioners from 31 different countries throughout the world (90% from Europe, 5% from North America/Canada, 5% from the Asia-Pacific area) participated in this conference. Approximately 25% of the over 200 contributions are incorporated into this book. The abstracts of all 200 contributions are included in volume 1 which was edited by E. A. Hany and K. A. Heller in 1992, and published by Hogrefe & Huber, Seattle (ISBN 3-8017-0684-2/ISBN 0-88937-111-3).

Unfortunately, we were not able to include here many other interesting papers due to lack of space and for financial reasons. In addition to volume 2, a German report on the workshop "Behinderung und Begabungsentfaltung" (Handicap and Development of Giftedness) has been published under the same title by the "Stiftung zur Förderung körperbehinderter Hochbegabter", Vaduz/Liechtenstein (1993) - ISBN 3-908-506-07-7; see the last contribution to the section 6 (Special Groups) in this volume.

The main criteria in realizing the necessary selection for volume 2 were a truly European and international representation of recent research topics in the field of gifted education and - of course - the quality of the contributions. Finally, we intended to focus not only research problems and outcomes but also their applicability to practice and policy. The editors thank all contributors for their confidence in us and for (generally) submitting the manuscripts on time.

The content ranges from opening speeches to keynote addresses (including commentaries), symposia, workshops, audiovisual and poster presentations. The selected papers are classified into the following categories or subject areas:

- (1) *Opening Speeches*, comprising of an official declaration of the Federal Government of Germany concerning their politics of nurturing the gifted, and of the introductory position paper of the chairman of the conference.
- (2) *Ability and Achievement*, focusing mainly on intraindividual differences of talents and skills which provide the basis of differential education.
- (3) *Creativity and Innovation*, with contributions mostly issuing recent theoretical developments either of cognitive or of organizational processes which constitute creative innovation.
- (4) *Development of Giftedness and Talent*, particularly from a life-long perspective, with contributions using methodological approaches as different as case studies and long-term longitudinal studies on representative samples.
- (5) *Gender Issues*, emphasizing empirically proven relationships between attitudinal and motivational sex differences and thematically corresponding differences in achievement.
- (6) *Special Groups*, the contributions of which demonstrate the regrettable fact that many talents are wasted by internal or external handicapping conditions.
- (7) *Identification and Psychological Measurement Problems*, comprising of contributions which reach from basic overviews to recent developments of new tests and procedures for identification.
- (8) *Gifted Education and Program Evaluation*, focusing primarily on comprehensive reviews of educational models or on special methodological procedures of evaluation.
- (9) *Teachers of the Gifted*, describing characteristics of more versus less experienced teachers which are of substantial influence to the education of the gifted.
- (10) *Policy and Advocacy in Gifted Education*, joining both contributions which represent the opinions held by political institutions of Germany and papers which add a broader national or international perspective on efforts of systematically nurturing the gifted.

In order to complete the proof-reading and because some papers from contributors who are not native English speakers had to be rewritten, we had to cope with standardizing the English as well as with time and budgetary problems. Hence we are now pleased to present the Proceedings of the 3rd ECHA Conference, 1992, for a greater audience. We want to express our thanks to all colleagues and co-workers who assisted us in the editing work. Heidi Röder, Edeltraud Schauer, and Monika Wersing typed several manuscripts, Catrin Herter and Kerstin Osterrieder checked the file transfers on the computers. Colleen S. Browder assisted in the translation into English, and Beate Karbaumer re-drew most of the figures and gave most manuscripts their final layout.

Finally, our thanks go to The Federal Ministry of Education and Science in Bonn, and the Donor Association for the Promotion of Science in Germany (Stifterverband für die Deutsche Wissenschaft) through "Bildung und Begabung e. V." (Private Association "Education and Talent") in Bonn for their grants. This support enabled us to publish volume 1 (Abstracts) and volume 2 (Proceedings). And we are grateful that the Hogrefe & Huber Publishers made it possible to publish this book in the tried and tested way. Our hope is that the Proceedings will contribute to the progress of gifted education in Europe and around the world.

Munich, January, 1994

Kurt A. Heller
Ernst A. Hany

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Responsibility in research on high ability

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The title of this keynote can be interpreted in several ways. I can only emphasize a few here.

(1) Contributions from research on giftedness to the improvement of practical requisites in the identification and nurturance of gifted children and adolescents.

From an educational psychological point of view, the role of nurturance of the gifted is primarily *individual development support*. This implies at least the following: a) "Giftedness" as a multifactorial concept, b) personality development is an interactive process, c) nurturance of the gifted as a function of optimizing individual (personality) and social developmental aspects. This is tangential to the social and educational policy of equal opportunity.

On a): Independent of whether "giftedness" is considered psychometrically as a predisposition toward outstanding achievements in various areas or cognitively as more or less domain-specific expertise, new theories favor multidimensional models of giftedness (cf. Gardner, 1985; Heller, 1986; Hany & Heller, 1991; Mönks, 1992). Theory-guided diagnostic and nurturance concepts thus call for differentiated approaches which are not represented by one-sided IQ-fixings or so-called cut-off models (Mönks & Heller, 1994). The practical identification of gifted children and adolescents frequently lags behind the state of the art recognitions from research on the gifted.

On b): Giftedness first manifests itself as a relatively non-specific individual achievement potential whose development interacts with the social learning environment from the very beginning. This indicates interaction with educational and socialization variables. This interaction process should be viewed as a mutual influencing of children's behaviors and parental upbringing practices. The hereditary background is then important in the development of giftedness mostly for the individual selection and employment of the learning opportunities presented by the social environment (cf. Scarr & McCartney, 1983; Weinert, 1992). Early indicators of giftedness even suggest that during the first few months and years of life particular activities develop which are expressed in curiosity and exploratory behaviors. These can be interpreted as influencing the socialization agents. Attempts to provoke socialization conditions adequate for giftedness and thus to actively influence the learning environment to satisfy basic cognitive and social-emotional needs are apparently characteristic of the behavior of very gifted children (cf. Friedrich & Lehwald, 1992). An important educational task for parents and teachers or other relevant socialization agents stems from this. The demand for early identification and nurturance of gifted children and adolescents is thus founded on the responsibility for providing appropriate learning environments.

On c): The constitution of the Federal Republic of Germany and that of most of the individual states guarantees the individual's right to equal opportunity. This is frequently - knowingly or unintentionally - incorrectly interpreted and used as an argument against educational programs for the gifted by its critics.

"With a view to the demand for equality of educational opportunity a ... dual nuancing of the equality term is necessary. On the one hand, equality in the sense of Article 3 of the constitution, means that every young person must have all educational paths open. There is no objective

reason (e. g. race, religion, social status, sex) for excepting someone from a particular educational path. On the other hand, the social state clause of the constitution (Art. 20, paragraph 1 in connection with Art. 2, paragraph 1 and Art. 3) states that a dynamic component is contained in the term of equality, such that each individual's own situation should be considered" (cited according to Gauger, 1992, p. 25).

The individual's right to equal education opportunities thus stands face to face with the social responsibility for offering an adequate spectrum of specific programs. The degree to which the individual youth takes advantage of these offerings cannot be determined by the state, but is determined by individual interests, abilities, educational goals, etc. This is not to say that the state should not insist on an obligatory basic education for everyone. Therefore, the decision for making use of educational opportunities lies with the individual him-/herself. In addition, there are many instances where personality development is interfered with through less adequate socialization conditions, deficient learning environments or individual handicaps. The school's task here and possible educational psychological counseling is to maximize the educational equality. This obligation results from the equality rights principle whereby the social components of equal opportunity should be discussed. This includes all youth, the gifted and not only those with learning and physical disabilities.

The realization of the constitutional right to equal opportunity, i. e. the transformation of needs into educational activities, includes questions central to applied research in giftedness. In addition to learning and ability psychological aspects, giftedness, instructional psychological, educational and social psychological or support-didactical problems are relevant.

(2) Research on giftedness includes not only technological or practical questions, but also necessitates basic scientific research approaches.

Scientific history has often shown the efficiency of applied research is greatly influenced by basic theoretical and experimental research. This basis rule also holds true for research on giftedness and for the practice of nurturing the gifted, including diagnosis, counseling, and intervention. One could name, for example, innovative approaches from more recent cognitive psychology or expertise research in the expert-novice paradigm (for current information, see also Gruber & Mandl, 1992; Schneider, 1992, 1993; Shore & Kanewski, 1993; Perleth *et al.*, 1993 or contributions from Cho, Freeman, and/or Sękowski, in this volume). This produced important drives within applied research on problem solving as well as in instructional questions, such as we find in research on learning and thought processes specific to the gifted, memory strategies, metacognitive competencies, coping styles, etc.

Additional topics, more related to basic scientific questions are based on longitudinal analyses (e. g. description and explanation) of development processes in the gifted. This includes social-cultural contexts which promote or inhibit development (cf. Mönks & Spiel, this volume). In addition, (semi-)experimental studies with the function of causal analyses, for example, for explaining of sex differences in various dimensions of giftedness (competence) and/or achievement areas (performance), especially in math, sciences, and technology (cf. Brody and Goldstein & Stocking, this volume). Scientific recognitions contribute not only to answering general or differential psychological questions. The explanatory knowledge acquired leads to the development of the knowledge for changes necessary in practical nurturance of the gifted, e. g. in counseling and intervention, in education and instruction.

(3) Important advances in knowledge about developmental conditions of gifted children and adolescents can also be expected from cross-cultural socialization research. This has thus far been somewhat neglected in the research of the gifted, despite its methodological advantages.

The reason for relatively few cross-cultural studies that can be referred to as more than international cooperations but meet scientific methodology requirements is the enormous cost

but also specific methodological problems which frequently confound the work and financial load. I will report more on this later. One expects *cross-cultural* research approaches within giftedness to bring about an increase in knowledge with regard to various cultural influences on individual developmental and educational processes (cf. Eckensberger & Krewer, 1990). This goal should be met by a specific research strategy. This means that cross-cultural psychology should be defined by research methods and not by the object research (Petzold, 1992). Three types of comparison are relevant: a) cross-national, b) cross-cultural, and c) cross-societal. In the context of our research problem, the second, cross-cultural studies are of interest; with regard to the cross-national view cf. Wilgosh (this volume). Culturally caused behavioral differences in individual development should be identified through the systematic comparison of psychology variables or results obtained in different cultural conditions. Equivalent or non-cultural measurement instruments must be employed. This is a major problem of cross-cultural research. On the basis of such research designs, universality assumptions can be examined in relevant development, educational, learning or instructional areas. This is a function of cross-cultural psychology which was already emphasized by Wilhelm Wundt in his psychology of different cultures at the turn of the century. Thus, the so-called *etic* (from phonetic) approach starts with a universality hypothesis of human behavior. In contrast, the so-called *emic* (from phonemic) approach looks at cultural socialization influences within certain cultures (cultural-relativity hypothesis). Accordingly cultural-specific and valid measurement which must also be culture free instruments make it difficult to actually make cultural comparisons. Therefore, newer ecopsychological models (e. g. Berry, 1980) attempt to integrate concepts from "emic" and "etic" (cf. Petzold, 1992, p. 311f.).

Cross-cultural studies can provide new recognitions about social-cultural development and nurturance conditions of the gifted solely from their change perspective. This could lead to greater variety in the support program ideas. Not only a practical use but also tolerance toward foreign cultures is increased (cf. Butler-Por, this volume). The meeting of international ideas and cultures can also be supported by international conferences such as this ECHA conference. Although the exchange of information and ideas is central here, the informal contacts should not be dismissed in their peace making role. If the participants of ECHA feel reached by this statement, then an important goal of ECHA has been achieved.

Before I go on to a comparative overview of the contents of the program, one last research policy responsibility should be mentioned.

(4) As long as research is supported by state or private/public foundations and is directly or indirectly a public service, a mutual responsibility grows between the society and the research community.

Without wanting to question the freedom of research - i. e. the responsible selection of topics and methods by the researchers themselves - the simultaneous responsibility of the society toward society by the direct or indirect funding of research must be emphasized. This stipulation also holds true for the research of giftedness, which otherwise is in danger of isolation (and not only from the mainstream of the scientific community). On the other hand, qualified researchers in this field have the same rights as other scientists, to demand appropriate work conditions where one can consider scientifically desirable questions from the field of basic research and also from the practice of giftedness nurturance. It can be taken as a positive sign that the scientific and public opinion about the uses and rights of research on giftedness is playing an increasing role - albeit small in comparison with other topics - in the consciousness of those responsible. Perhaps this international conference in Europe can increase the initiative here and elsewhere - for the good of the coming generation and to improve the future of all mankind.

(5) A content analysis of the topics here at the third ECHA conference in comparison with the previous nine WCGT world conference proceedings and the most important

journals in the field of giftedness research points to important trends in the international research scene. This could be important for the continual development of research on the gifted at the European level.

First, here are analysis results from the conference proceedings of the previous nine world conferences of the World Conference for Gifted and Talented Children (WCGT). A total of 408 conference presentations have been published from 1975 to 1992. This corresponds to a publication percentage of about 15%. Approximately 40% were from practice, 20% each in the areas of theoretical and empirical reports (on applied research), 15% on gifted programs and support of the gifted. Only 5% (in the last three years) discussed the topic of basis research (Heller & Menacher, 1992). This picture reflects the analyses of relevant journals (Pyryt, 1988; Rogers, 1989; Carter & Swanson, 1990). Here, too, the majority of the practice-oriented applied research is employing generally simple statistical methods. Only about 25% of the studies reported can be considered as hypothesis oriented. More demanding statistical methods such as path analyses or cluster analyses are rarely found here and are probably published in journals (cf. Pyryt, 1988).

The need to catch up in theoretically guided experimental and quasi-experimental research on giftedness is emphasized indirectly in the classification of psychological subdisciplines taking part. The percentage of general psychologists taking part is negligible (median of about 5%), whereas educational psychologists make up about 70% and clearly dominate.

A more recent content analysis (Heller, 1993) of (English-language) journals with the majority of publications on the gifted from the last 10 years (Gifted Child Quarterly, Roeper Review, Journal for the Education of the Gifted, and Gifted Education International) provided the following picture: The topics "Gifted Education" and "Programs and Nurturing" are most strongly represented in all four journals analyzed with percentages between 30 and 60. Topics such as "Characteristics of the Gifted and Talented" are more frequently found in the Journal for the Education of the Gifted (39%) and in the Gifted Child Quarterly (28%) versus the Roeper Review (21.5%) and Gifted Education International (19%). "Social Context" has its strongest representation in the Gifted Child Quarterly with 13%, "Identification" with 7.5% each in the Gifted Child Quarterly and the Journal for the Education of the Gifted. The rates of "Learning and Perception" and "Development" are astonishingly low in all four journals. Solely the category "Definitions and Concepts of Giftedness and Talent" had higher percentages in the Gifted Child Quarterly (27%) and the Journal for the Education of the Gifted (16%). These results generally confirm those reported by Rogers (1989) and Carter and Swanson (1990) who, in part, included different journals.

What picture is presented by the contributions to the Third ECHA conference? Ninety percent of the 400 conference participants come from Europe and 10% from overseas. Of the non-Europeans, 5% are from North America and Canada and 5% from Asia. Africa, Australia and New Zealand are not represented. The German participants are, as expected, the leading group with 35%. A considerable number of visitors come from the former communist states of Europe. Together they make up nearly a third. Following Germany (35%), Hungary, Poland and the CSFR are represented with 9%. The former states of the USSR follow with 7%. With that the Third ECHA Conference contributes significantly to the European Unification. The changes which were already becoming apparent two years ago at the Second ECHA Conference (1990) in Budapest seem to continue in a positive manner despite current conflicts within Europe. Concerning this our conference has already passed the first hurdle. The main topics of this conference and those of the preceding world congresses on high ability are relatively similar. The question of identification, however, with 14%, is dealt with twice as frequently as at the other nine world congresses (with an average of 7%).

There is a lack of support and practical experience concerning the education of the gifted including information about giftedness in former communist states of Europe. With regard to definition problems and theoretical bases of support for the gifted there is a growing interest. In contrast to this, in Western Europe there is a dominant tendency to establish private and political initiatives for support programs for the gifted. This might be a positive sign. Or does a low percentage (2%) of future oriented topics at this conference mean that it is necessary to be sceptical concerning the planning concepts? I hope not. With regard to actual analysis results, we know that scientific disciplines and subdisciplines of psychology and education are confirmed. The vast area of research into high ability seems to be dominated by educational psychology and related subjects. As an educational psychologist, I do not regret this although a higher scale of interdisciplinary work could exert a positive influence. This demand also concerns the relationship between practical and basis research. "Pragmatic nature and education of the gifted on an unsure scientific basis" - to employ Franz Weinert's sober description (Waldmann & Weinert, 1990, p. 184) - will provoke further discussions.

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