

Weilguny | Resch | Samhaber | Hartel

# white paper

promoting talent and excellence



# White Paper

## Promoting Talent and Excellence

Österreichisches Zentrum für Begabtenförderung und Begabungsforschung/  
Austrian Research and Support Center for the Gifted and Talented (Ed.)

On Behalf of the “Task Force for Giftedness Research and Gifted Education”:

Austrian Federal Ministry of Education, Arts, and Culture (BMUKK)

Austrian Federal Ministry of Science and Research (BMWf)

Austrian Research and Support Center for the Gifted and Talented (ÖZBF)

Authors:

Mag. Dr. Walburga M. Weilguny

MMag. Dr. Claudia Resch, MMag. Elke Samhaber

MMag. Birgit Hartel

Translator:

Dr. Tanja Gabriele Baudson, Dipl.-Psych., M.A.

Editor

Austrian Research and Support Center for the Gifted and Talented – ÖZBF  
On Behalf of the Task Force for Giftedness Research and Gifted Education  
© 2013 (German version 2011)

Graphic Design & Pictures: Mag. Christina Klaffinger (ÖZBF)

Layout: Lydia Schiffkorn, Bakk.komm (IMB Salzburg)

Print: Laber Druck

Publisher: Austrian Research and Support Center for the Gifted and Talented

ISBN: 978-3-9503401-2-9

All contents are protected by copyright laws. The rights of usage remain exclusively with the authors and the Task Force for Giftedness Research and Gifted Education.

# Task Force for Giftedness Research and Gifted Education\*

Chairperson: Secretary-General SC Mag. Friedrich Faulhammer (BMWF)

Deputy Chairperson: SC Kurt Nekula, M.A. (BMUKK)

Executive Secretary: MR Dr. Thomas Köhler (BMWF)

Executive Vice-Secretary: Dr. Andrea Fraundorfer (BMUKK)

MR Dr. Gerhard Krötzl (BMUKK)

Dr. Claudia Resch (ÖZBF)

Mag. Silke Rogl (ÖZBF)

LSR-Pres. a.D. Mag. Gerhard Schäffer (ÖZBF)

MR Dr. Patrizia Lenitz-Zeitler (BMUKK)

Dr. Paul Wilkens (BMWF)

bm:uk

BMWF<sup>a</sup>

 özbf

\* Members since December 2012



## TABLE OF CONTENTS

Preface by the Austrian Federal Minister Dr. Claudia Schmied	10
Preface by the Austrian Federal Minister Dr. Karlheinz Töchterle	11
1 Promoting Talent and Excellence	12
2 Promoting Talent and Excellence: Key Challenges and Goals	16
2.1 Promoting Talent and Excellence as Development of the Individual	18
2.1.1 Individualization and Personalization	18
2.1.2 Early Fostering	20
2.1.3 Equal Opportunities	21
2.2 Promoting Talent and Excellence as an Economic and Social Task	22
2.2.1 Fostering General Education and Excellence	22
2.2.2 Competences for the Future	23
2.2.3 The European Union as a Dynamic Economic, Business, Education, and Cultural Area	25
2.2.3.1 Life-long Learning and Mobility	26
2.2.3.2 Educational Quality and Efficiency	27
2.2.3.3 Fairness, Solidarity, and Active Citizenship	27
2.2.3.4 Innovation, Creativity, and Entrepreneurial Thinking	28
2.3 Promotion of the Gifted and Talented as a Specific Responsibility of the Educational System	30
3 Promotion of Talent and Excellence as a Legal Right	34
3.1 The Legal Basis in Elementary Education	35
3.2 The Legal Basis for Schools	37
3.3 The Legal Basis for Tertiary Education	40
3.4 The Legal Basis for Out-of School and Adult Education	41

4	Fields of Action	42
4.1	Developing Networks	43
4.1.1	Developing an Effective Network	49
4.1.1.1	Coordination within the Network	49
4.1.1.2	Ensuring a Clear Division of Tasks	51
4.1.1.3	Federal Coordination Centers	51
4.1.1.4	Nominating Commissioners at Elementary Educational Institutions and Schools	52
4.1.1.5	International Networks	52
4.1.1.6	Quality Assurance	52
4.2.1	Early Fostering and Elementary Educational Institutions	53
4.2	Qualification	53
4.2.2	Teacher Training	54
4.2.3	Psychology	57
4.3	Research	58
4.3.2	Need for Research	61
4.4	Field of Action: Early Talent Development	64
4.4.1	Nurturing Giftedness and Talent in the Family and at Elementary Educational Institutions	64
4.4.1.1	Creating a Talent-friendly Culture of Learning	64
4.4.1.3	Nurturing Giftedness and Talent at Elementary Educational Institutions	66
4.4.1.4	The Transition from Kindergarten to Primary School	68
4.4.2	Quality Assurance and Development	69
4.5	Field of Action: School	72
4.5.1	Inclusive and Integrated Promotion in Class	72
4.5.2	School Development	75
4.5.3	School Partnerships: Cooperation between Teachers and Parents	76
4.5.4	Quality Assurance and Development	78
4.6.1	Permeability between School and University	81

4.6	Field of Action: University	81
4.6.2	Permeability between Teacher Training Colleges and Universities	84
4.6.3	Student Promotion	84
4.6.3.1	Acceleration	84
4.6.3.2	Enrichment	85
4.6.3.3	Funding for Students	87
4.6.4	Establishing Coordinating Centers for the Promotion of Talent and Excellence	88
4.6.5	Institutes and Clusters of Excellence	89
4.6.6	Quality Assurance and Development	90
4.7.1	Arguments in Favor of Talent Promotion in the Community	91
4.7.2	Developing a Talent-friendly Culture	91
4.7	Field of Action: Community	91
4.7.3	Possibilities of Talent Promotion for Communities	92
4.8	Field of Action: Economy and Working World	94
4.8.1	Cooperation with Educational Institutions	94
4.8.1.1	Cooperation with Schools	95
4.8.1.2	Cooperation with the Tertiary Educational Sector	96
4.8.2	Foundations as a Source of Funding for the Gifted and Talented	97
4.8.3	Creating Specific Occupational Fields	97
5	Summary	98
6	References	100
	Laws, Decrees, and Legal Regulations	101
	Further References	102

## Preface by the Austrian Federal Minister Dr. Claudia Schmied



Foto © Hans Ringhofer

Not more than twenty or thirty years ago, proponents and critics of talent promotion were still fighting a virtually irreconcilable battle. Nowadays, most of these ideological differences have been overcome. It is a fact that children and youth achieving at high intellectual, artistic, and physical levels from an early age on do exist – a fact encountered by teachers in particular, but also by parents.

Educational institutions are faced with the challenge to support adolescents showing particular interests or talents and achieving at a level beyond their peers, and to foster and develop their abilities in a way that later excellence in specific domains can be achieved. As shown in the present White Paper, talents and excellence should be conceived of as phenomena that unfold dynamically in interaction with one's social environment. Providing specific support measures and individual mentoring may help transform adolescents' various potentials into achievements that are both personally satisfying and socially relevant.

Hence, educational and community facilities such as libraries or art, cultural, sports, and scientific institutions are invited to contribute their share to the development of young people's potentials.

It is important that talent promotion focuses on adolescents as individuals. We should not only consider the added value they provide for society through their achievements, and also, the integrated development of their personalities, which will allow them to play their part in society.

Dr. Claudia Schmied

A handwritten signature in black ink that reads "Claudia Schmied". The signature is written in a cursive, flowing style.

Federal Minister of Education, Arts, and Culture

## Preface by the Austrian Federal Minister Dr. Karlheinz Töchterle

During my work as a vice-chancellor and professor at an Austrian university, I have often been impressed by the number and diversity of talents that characterize the people in our country. Experience has taught me that these talents are opportunities – even more so in the future than today.

To master this task successfully, we must attend to what is crucial to a sustainable politics of science: knowledge as the challenge of the 21<sup>st</sup> century, education as our country's greatest resource on the one hand and as the "commodity" for future generations on the other hand, and research as the "greenhouse" for innovations. "Talent" and "excellence" are two important pieces of the puzzle: talent as a dynamic potential that has been given to us as both freedom and responsibility; and excellence as its best possible realization and presentation (performance).

The present White Paper is the result of a discussion that has lasted for more than one year. It is presented by the interministerial "Task Force for Giftedness Research and Gifted Education" headed by Secretary General SC Mag. Friedrich Faulhammer and directed by Dr. Thomas Köhler, Head of Division.

This White Paper covers many topics and structures, from kindergarten through school and university to research. Raising no claims, of being the answer to everything, it invites its readers to join a broad debate on how we can face up to European and global competition, avoid brain drain and ensure brain gain, while striving to foster the talents and potentials of Austria's young people and to help them achieve excellent performance.

I thank all persons and institutions concerned with the project – a work in progress.

Dr. Karlheinz Töchterle



Federal Minister of Science and Research



Foto © Jakob Glaser ÖVP

# 1 Promoting Talent and Excellence



The goal of promoting talent is to support the development of potentials in all children and youth in the best possible way. All children and youth, regardless of the level of their abilities, can benefit from talent support, the underlying assumption being, that they all possess resources of talents that can yet be developed.<sup>1</sup> Promoting the highly gifted and talented is one aspect of general talent promotion; it usually focuses on children and youth who have already been identified as outstandingly able and motivated, i.e. people that are said to be blessed with giftedness. In the school context, talent promotion is often equated with the promotion of specific talents, especially with the development of talents in a particular domain.

Promoting excellence is less focused on potentials to be developed, but rather on the perfection and elaboration of outstanding achievement in a given domain, that has already become apparent. The promotion of excellence is therefore based on the successful promotion of talent. In their excellence strategy, the Austrian Council for Research and Technology Development described this process as “raising quality at the basis and pushing excellence at the top.”<sup>2</sup>

The promotion of talent and the promotion of excellence depend on and complement each other, the first striving to foster abilities in all people while the latter aims at responding adequately to the needs of the highly gifted and talented. Talent promotion ensures that potential is identified right from the beginning and can thus be continually supported and developed. Fostering excellence, on the other hand, which is based on this comprehensive talent promotion, can scoop from a large pool of potentials and thus nurture excellence in talented individuals, who are willing and able to substantially further the development of our society.

This White Paper is based on a multidimensional and dynamic conception of giftedness and talent, encompassing a person’s overall potential, which unfolds through life-long learning and

---

<sup>1</sup> Oswald & Weilguny (2005).

<sup>2</sup> Rat für Forschung und Technologieentwicklung/Austrian Council for Research and Technological Development (2007), p. 10.



development. Hence, giftedness and talents are not statistical figures, but are processes, resulting from the interaction between people's individual predispositions, their ability to shape their own development, and the influences of nurture.<sup>3</sup>

Because the development of abilities results from the interaction of various factors, potential does not necessarily lead to extraordinary achievement. Even very high intelligence, in terms of outstanding reasoning and problem solving abilities, is but one of many factors and thus an insufficient predictor of high-level achievement. Besides cognitive abilities, the will to achieve, interest in relevant domains, work discipline, self-confidence, and self-monitoring skills are necessary prerequisites for a person to excel.<sup>4</sup> Thus, the promotion of giftedness, talent, and excellence has to focus on a variety of factors. Extraordinary achievement requires efficient learning. Domain-specific knowledge and expertise are as necessary as "soft skills", e.g., social and emotional competence, communication skills, and persuasive power.<sup>5</sup> Expertise researchers consider prior knowledge, motivation, and many years of intensive deliberate practice in a domain to be even more important predictors of performance development than intelligence.<sup>6</sup>

Just like ability, achievement is "not a constant, but an ever-changing value, depending on experience and learning opportunities."<sup>7</sup> Moreover, achievement should not only be viewed in the light of performance, measurability, and profit, but also includes accomplishments related to shaping one's individual life and one's social environment.<sup>8</sup>

With respect to the promotion of talent and excellence, the crucial task of the environment is to support children and youth in unfolding and developing their potential into individual excellent performance and to provide optimal conditions for the actualization of their potentials into achievement and

---

<sup>3</sup> iPEGE (2009).

<sup>4</sup> Ibid.

<sup>5</sup> Neubauer & Stern (2007)

<sup>6</sup> Ericsson, Krampe, & Tesch-Römer (1993).

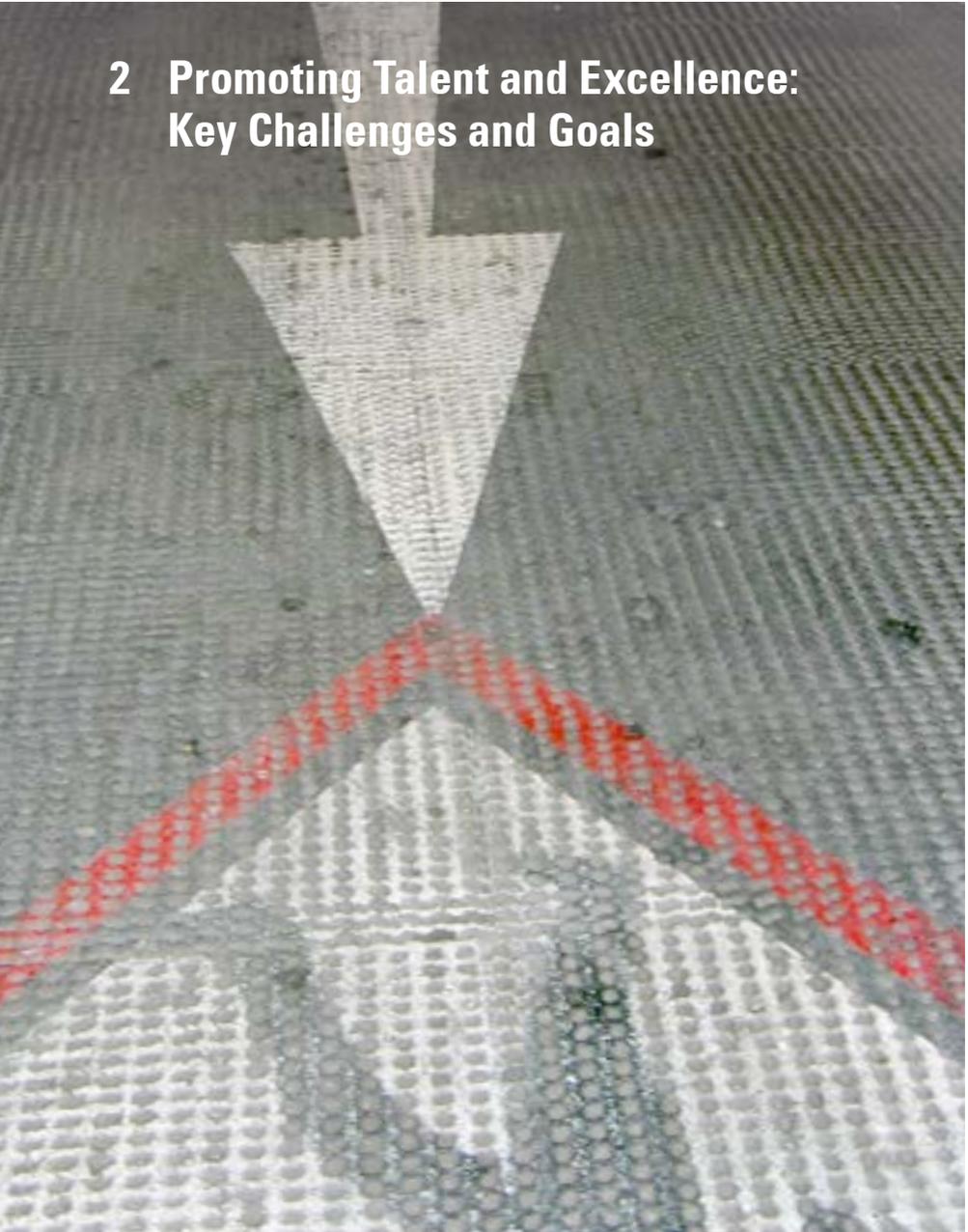
<sup>7</sup> Stamm, Niederhauser, & Müller (2009), p. 89. [transl. TGB]

<sup>8</sup> iPEGE (2009).

performance. Besides promoting individual abilities, shaping a person's environment to make it fit the person's needs is a prerequisite for the promotion of talent and excellence. Particular attention should be paid to a supportive family environment, conducive teaching and learning structures, and social belonging.



## **2 Promoting Talent and Excellence: Key Challenges and Goals**



The promotion of talent and excellence (and education in general) is faced with three main challenges: personalization, socialization, and qualification. It therefore covers a broad range of tasks that are relevant not only to economic, cultural, and social wealth but also for one's individual pursuit of autonomy, competence, and relatedness.<sup>9</sup> The focus of personalization is to develop individuals' personalities and to support their personal life goals. It also includes respect for their individual needs for happiness and meaning. Socialization targets the development of social skills and values as well as a person's willingness to contribute personal abilities and talents for the benefit of society. Qualification supports the development of expert knowledge as well as specific abilities and skills with regard to economy, labor, science, sports, arts, and culture.

Hence, one challenge, that the promotion of talents and excellence is confronted with, is to strike a balance between these different goals, which sometimes even seem to mutually exclude each other – at least from a short- or medium-term perspective. On the one hand, young people should receive an integrated and comprehensive education, in a way that fosters their development in all their fields of interest and talent, thus offering them a broad range of opportunities. On the other hand, society's need for excellent performance calls for early accentuation and specialization. In a similar way, personalization requires that people's individual needs and interests as well as their personal development are responded to, while socialization requires consideration of others, willingness to compromise, and possibly even renouncing one's individual scope of freedom. When promoting ability and excellence, objective and normative standards (e.g., specific requirements of a domain), the interests of the learning community, and the interests and needs of the individual as well as socio-economic interests should be brought in line as much as possible.

---

<sup>9</sup> Cf. Ryan & Deci (2000).

## 2.1 Promoting Talent and Excellence as Development of the Individual

Leading All Learners to Their Individual Maximum Performance

Adapting to Stages of Life and Learning and to Learners' Needs through Individualization

Consolidating Value-oriented and Autonomous Personalities through Personalization

### 2.1.1 Individualization and Personalization

The key requirement for the "School of the Future" is to lead all learners, with their different prerequisites and personal backgrounds, to their individual maximum performance.<sup>10</sup> This requirement is based on the assumption that every individual is endowed with potentials and interests which, in consequence, entitle him or her to receive support and fostering. All abilities, talents, potentials and interests should be identified, taken seriously, valued, and supported.<sup>11</sup>

To do justice to every learner, educational institutions and their structures have to adapt to their learners' current stages of life and learning as well as their individual learning needs.<sup>12</sup> Individualized educational offers can ensure that the results of general and professional education are independent of a person's socioeconomic background or other potential disadvantages (e.g., gender, ethnic or linguistic minority status, disabilities, regional asymmetries, etc.).<sup>13</sup> The guiding principle should be to provide every subgroup with optimal chances for development.<sup>14</sup>

However, mere individualization of educational offers is not sufficient for a person's full development. One of the most important interests, of education and schools, is the development and integrative consolidation of value-oriented personalities.<sup>15</sup> The focus of training and education should also be on developing individual skills that are necessary for a person to deal with freedom, values, and responsibility.

Personalized education goes beyond individualization. Of course, learners' individual prerequisites for learning, their needs and interests must be respected in the course of their development

---

<sup>10</sup> Expert Commission (2008).

<sup>11</sup> Expert Commission (2007).

<sup>12</sup> Expert Commission (2008).

<sup>13</sup> Commission of the European Communities (2006).

<sup>14</sup> Boss-Nünning (2006).

<sup>15</sup> Industriellenvereinigung/Federation of Austrian Industry (2009).

towards excellent performance; but that is but part of the story. The goal of training and education is to empower individuals to shape their lives autonomously. Human development is basically open and self-defining. Children and youth should be increasingly encouraged to become authors of their own lives,<sup>16</sup> who are free to make decisions and also responsible for the development and use of their potentials.

In this sense, personalization means educating for autonomy, for awareness of values, and for responsibility. The task of training and education is twofold. On the one hand, training and education have to support the individual's development towards an independent identity. On the other hand, they have to raise awareness in children and youth to the fact that they are interdependent members of their respective reference systems, and to prepare them to willingly contribute their share to the development and wealth of a greater entity. Possibly, the most important goal of education is to enable a person to assume responsibility, as an expression of his or her awareness of this interdependent affiliation with social systems.<sup>17</sup> At this point, personalization and socialization become one.

In terms of personalization, individualization means to support learners' development from a child's dependency towards individual freedom, taking into consideration the individual's current developmental status on his or her way towards an understanding of the interdependence within the system she/he is a part of. Only on the basis of this insight, can autonomous moral decisions be made.

Another aspect of personalization is to support learners in their "pursuit of happiness". According to Aristotle, any action of a person has the goal of making him or her happy.<sup>18</sup> Supporting children and youth in the development of their potentials has to take this individual pursuit of happiness into consideration. The goal of any promotional measure should be "to provide children and youth with the best possible opportunities for their mental,

---

<sup>16</sup> Weigand (2004).

<sup>17</sup> Poostchi (2006).

<sup>18</sup> Aristotle (1985).

## Consideration of the Individual Pursuit of Happiness



## Early Promotion of Potentials is Crucial to the Development of Learning Processes

spiritual, and physical development so that they can become healthy, self-confident, happy, achievement-oriented, committed, artistic, and creative persons [...], with students, parents, and teachers all working together for this goal.”<sup>19</sup>

Meaningful activities are one of several sources of happiness.<sup>20</sup> Conversely, happiness leads to better learning and higher achievement.<sup>21</sup> Educational institutions are called upon to make use of the developmental potential that happiness and satisfaction provide, e.g., by providing meaningful learning activities.

### 2.1.2 Early Fostering

Neuropsychological findings suggest that early fostering is of eminent significance for connections in the brain to be established and thus for the development of learning processes. The human brain is plastic. In young children in particular, the brain reacts to environmental stimulation, thus being able to adapt to a large variety of cultures and settings. Hence, early nurturing of potentials is crucial to children’s best possible development. If children’s potentials are not unlocked early, and stimulated and fostered with sufficient intensity, they may become stunted or remain underdeveloped.<sup>22</sup>

However, early fostering should not mean to over-challenge or turn children into passive consumers of educational programs. Children are equipped with the drive to learn new things and independently seek challenges which help them grow. The child’s drive to explore and his/her needs should guide parents’ as well as kindergarten and elementary school teachers’ choices of educational activities and programs.<sup>23</sup> Adequate early fostering provides room for development and opportunities for self-directed, playful learning and avoids excessive demands on the child.

---

<sup>19</sup> Section 14 (5a) of the Austrian Federal Constitutional Act. [transl. TGB]

<sup>20</sup> Smith (2005).

<sup>21</sup> Spitzer (2002); Stangl (undated).

<sup>22</sup> Stadelmann (2003).

<sup>23</sup> Hüther (2008).

### 2.1.3 Equal Opportunities

Nurture is a decisive factor for a person's gifts and talents to fully unfold. One crucial predictor of the development of children's abilities is the social status of their families. Empirical studies have shown that a family's socioeconomic status is even reflected in the child's brain development: Children from families with low levels of income and education tend to show deficiencies in verbal and memory abilities. The earlier a child is exposed to poverty, the more serious are the effects.<sup>24</sup>

Therefore, fostering measures alone cannot guarantee equal opportunities in the promotion of talents and excellence, even if such interventions are already provided at an elementary educational level (i.e., kindergarten). Those who wish to promote talents and excellence have to take socio-economic family conditions into consideration. As long as not all families have sufficient means and education to provide for their children's upbringing, equity cannot be ascertained.

**Equal opportunities  
through consider-  
ation of socio-  
economic family  
conditions**

---

<sup>24</sup> Hackman & Farah (2009).



## 2.2 Promoting Talent and Excellence as an Economic and Social Task

### Talents as Resources in a Knowledge-based Society

Talents, skills, and knowledge are major resources in a knowledge-based society. The promotion of talents and excellence is therefore an essential driving force for economic development and innovation as well as for progress in science and research.<sup>25</sup> Developing potentials for achievement means an increase in value for the culture of a society, because these potentials contribute directly to finding solutions to problems and to the development of creative products.<sup>26</sup> The promotion of ability and excellence is therefore a prime concern for any community.

Furthermore, the promotion of talent and excellence should also foster those skills and attitudes that are required in social contexts and interactions. Integrating people into society and treating them with respect, requires the confidence of others in their ability to act responsibly. Being able to assume responsibility for one's actions is crucial, not only for socialization and personalization, but also for the qualification of those to be educated and trained.

### Promotion of General Education as a Prerequisite for the Promotion of Excellence

#### 2.2.1 Fostering General Education and Excellence

Great achievements in science, economy, politics, and culture cannot be attained unless all high potentials are fostered in the best possible way. The promotion of top athletes provides an exemplary best-practice model. Schools and sports clubs offer athletic education to everyone. Promising top athletes can thus be drawn from a large talent pool. Just as in the athletic domain, individuals with high abilities in the cognitive, technical, artistic, and social-emotional domains need to be fostered early and systematically. Potentials need to be identified early. Promoting talent in the sense of general promotion is democratic and supports efforts towards equal opportunities; furthermore, it offers the advantage, for both the individual and society, that no potential is lost.

---

<sup>25</sup> Resch, Samhaber, & Weilguny (2008).

<sup>26</sup> Gardner (1999).

General promotion cannot replace the goal-oriented promotion of selected high potential groups, though. The promotion of excellence, in terms of intensive promotion of high-quality achievement, is just as necessary to ensure top performance, enabling Austria to face the international competition for progress and innovation. Unlike personality, characteristics such as intelligence, top-level achievements and innovations are not distributed normally. Some particularly successful individuals hold an over-proportional share in the overall number of top-level achievements. The repertoire of classical music, for instance, comprises the work of 250 composers; 50% of these compositions were written by 16 persons only.<sup>27</sup> The fact that most top-level achievements are realized by very few highly productive individuals can also be observed in scientific publications or top-level athletic performance.<sup>28</sup> Investing in the specific promotion of these high achievers is therefore essential, for both social and economic reasons.

### **2.2.2 Competences for the Future**

The European Union defines competences as a “combination of knowledge, skills and attitudes appropriate to a particular situation.”<sup>29</sup> Because of shifting economic patterns, globalization, the development of new technologies and demographic change, competences such as personal responsibility, self-organization, the ability to cooperate, a life-long willingness to learn, and maintaining one’s learning ability are increasingly important in a modern society.<sup>30</sup> Parallel with the development of professional competences, personal and social competences should also be developed. “What matters is not to deliver cultural goods to posterity, but to spark the spirit that has created them,”<sup>31</sup> as neurobiologist Gerald Hüther puts it. He criticizes that most schools do not provide sufficient training with respect to those

---

<sup>27</sup> Moles (1971).

<sup>28</sup> Ziegler, Grassinger, & Harder (2008).

<sup>29</sup> European Commission (2005), p. 3.

<sup>30</sup> Expert Commission (2008).

<sup>31</sup> Hüther (2008). [transl. TGB]



qualifications that are most relevant in life, such as the ability to empathize, the planning of actions, tolerance to frustration, and impulse control. Besides imparting factual knowledge, schools should increasingly embed scientific-investigative approaches, networking abilities, and implicit knowledge into their curricular and learning goals.

Fostering the so-called key competences, as defined by the European Parliament and Council in 2005, seems particularly relevant to the development of excellent performance:

- communication in the mother tongue;
- communication in foreign languages;
- mathematical competence and basic competences in science and technology;
- digital competence;
- learning to learn;
- interpersonal, intercultural and social competences and civic competence;
- entrepreneurship; and
- cultural expression.<sup>32</sup>

Aspects such as critical thinking, creativity, initiative taking, problem solving, risk assessment, decision making processes, and managing feelings constructively play a role in all of these key competences.<sup>33</sup>

During the last years, the orientation of the educational system in Austria has shifted towards the development of skills and competences. Curricula have been adjusted to the acquisition of competences, which are assessed in the context of educational standards and the matriculation exam. Simultaneously, educational steering committees push efforts that attempt to adjust education to the competences to be acquired. The foundation of competences has to begin early, though: Even elementary education (i.e., kindergarten) should

---

<sup>32</sup> European Commission (2005).

<sup>33</sup> European Commission (2005).

phrase educational goals in terms of competence orientation. The national curriculum for elementary educational institutions is an example of such a competence-based definition of education, which should be continued within school curricula.<sup>34</sup>

Furthermore, educational institutions bear the responsibility to maintain, utilize, and support their students' thirst for knowledge and their love of learning, which represent the keys to and the driving forces for life-long learning, education, and development.<sup>35</sup> Following compulsory school education, the individuals themselves and the companies they work at should assume responsibility for deepening and refining the competences mentioned above, in the context of general and professional adult education.<sup>36</sup>

### **2.2.3 The European Union as a Dynamic Economic, Business, Education, and Cultural Area**

In May 2009, based on the Lisbon goal of 2000 to make the European Union the most dynamic economy in the world, the Council of the European Union designated the further development of education and training as a core domain of the intra-European cooperation up to the year 2020. According to the Council, an efficient "knowledge triangle" comprising education, research, and innovation, as well as the support of all citizens represent the decisive factors for competitiveness, growth, and employment as well as for justice and social integration.<sup>37</sup> This has immediate consequences for education and training, which should especially focus on the following challenges mentioned below.

**Knowledge Triangle: Education, Research, and Innovation**

---

<sup>34</sup> Charlotte Bühler Institute, on behalf of the Austrian Federal State Government Offices, the Vienna Magistrate & the Federal Ministry of Education, Arts, and Culture (2009).

<sup>35</sup> Expert Commission (2007).

<sup>36</sup> Expert Commission (2008).

<sup>37</sup> Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ("ET 2020").



### 2.2.3.1 Life-long Learning and Mobility

The ability to life-long learning is of utmost importance in an information society where the amount of knowledge grows exponentially. However, the acquisition and continuous development of competences over the lifespan require a comprehensive concept for life-long learning, national quality frameworks based on competences, and educational systems that are able to easily adapt to changes. Greater openness for and acknowledgement of informal ways of learning and their outcomes, the creation of flexible forms of learning as well as the development and use of new teaching and learning technologies are indispensable for the fostering of competences in life-long learning. Individualized access to education and knowledge as well as permeable systems should be guaranteed throughout Europe to warrant international mobility.<sup>38</sup>

Partnerships between representatives from civil society, economy, education, and research should be strived for in the promotion of talent and excellence. Cooperation between economy, research, and education may stress the importance of early fostering of innovation and entrepreneurial spirit and substantially support people's efforts to acquire competences and qualifications that are relevant to the labor market.<sup>39</sup> However, employability, with the goal of ascertaining future competitiveness, is but one aspect of life-long learning. Life-long learning is just as important for personal development and growth. It is also the basis for active participation in civil society, thus helping to increase equity.<sup>40</sup>

---

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

<sup>40</sup> ExpertInnenkommission/Expert Commission (2008).

### 2.2.3.2 Educational Quality and Efficiency

To warrant top-level performance, European economics and science require highly educated and qualified young talents. This can only be achieved through an educational system that holds high quality standards and life-long promotion of talents and excellence as core components.

Assuming the promotion of talent and excellence as a guiding principle for the development of educational institutions at the organizational, structural and instructional level<sup>41</sup> will improve the overall quality of teaching and learning. Learning environments that foster talents lead to greater satisfaction in both learners and teachers. Designing individualized and differentiated learning processes will boost performance in all learners.

Improving learning opportunities must, however, be paralleled by optimizing basic, advanced, and further training for teachers. The teaching profession ought to represent an attractive career option,<sup>42</sup> with effective quality control systems established at all educational institutions to ensure a continuous developmental process.

### 2.2.3.3 Fairness, Solidarity, and Active Citizenship

In education, fairness refers to equitable access to education, chances, and adequate fostering within the educational system for all citizens, with the goal to make educational outcomes independent of a person's socioeconomic background and other potentially disadvantaging factors.<sup>43</sup> Fairness in education can be guaranteed, for instance, by responding to individual learning conditions or by granting access to further education

---

<sup>41</sup> Campbell, Eyre, Muijs, Neelands, & Robinson (2004).

<sup>42</sup> Schlussfolgerungen des Rates vom 12. Mai 2009/Council Conclusions of 12 May, 2009.

<sup>43</sup> Kommission der Europäischen Gemeinschaften/Commission of the European Communities (2006).



**Promotion of Talent and Excellence as Driving Forces for Quality Development**

**Responding to Individual Learning Conditions and Education for All**

## Promoting Social-Emotional Abilities

## Developing Active Citizenship

to everyone;<sup>44</sup> that way, learners with special needs or from disadvantaged backgrounds are taken into consideration as well.

Promoting solidarity is based on the promotion of social and emotional abilities. Tolerance, the ability to work in a team and to deal openly with others, the ability to create and maintain a dialogic culture of discussion as well as the development of specific leadership qualities are the basic principles for social cohesion. One important goal in the promotion of social abilities is to support positive interactions between people from diverse backgrounds.<sup>45</sup>

Intercultural competences, democratic values, respect for fundamental rights and for the environment are essential for developing active citizenship; the foundations for these competences should be laid early.<sup>46</sup> It is particularly important to promote and develop social and emotional competences in people striving for future leadership positions – as a “responsible elite”.

### **2.2.3.4 Innovation, Creativity, and Entrepreneurial Thinking**

The promotion of talent and excellence makes a decisive contribution to economic, scientific, artistic, medical, and technological achievements. Creativity represents the most important source of innovation in this context, being relevant for the individual as well as for society and the economy. Creativity helps us face professional and personal challenges. It leads to new scientific insights, new movements in art, inventions, and social programs, to mention but a few examples. The economy benefits from new services and products, which creatively adapt existing resources to changing conditions.<sup>47</sup>

---

<sup>44</sup> Schlussfolgerungen des Rates vom 12. Mai 2009/Council Conclusions of 12 May, 2009.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid.

<sup>47</sup> Sternberg (2003).

The promotion of creativity requires an education that is favorable to creativity. As long as academic learning is predominantly focused on analytical abilities, students are unable to develop and tap their full creative potential. The environment must value creativity and the personality characteristics supporting its development, e.g., self-confidence, readiness to assume risks, and a preference for independent thinking. Innovations that lead to transformations of our society rely on a great bandwidth of abilities that should be developed early: e.g., the ability to identify problems and to see them in a new light; the ability to think critically and to integrate interdisciplinary knowledge, as well as the ability to convince others of a good idea.<sup>48</sup> Because creative products are hardly the product of one individual alone in today's working world, the ability to work in a team is a crucial competence that should be fostered with regard to an innovative entrepreneurial spirit.

---

<sup>48</sup> Ibid.



## 2.3 Promotion of the Gifted and Talented as a Specific Responsibility of the Educational System

**Gifted Students  
Need to be  
Provided with  
Learning  
Opportunities that  
Match their  
Specific Abilities.**

**Talent Promotion  
as a Preventive  
Measure**

In accordance with the ideal of fair and adequate treatment of all people, gifted people should also be granted the right to suitable fostering of their potentials. Supporting students with special educational needs has had a long tradition in Austria. With two amendments dating from 1993 (SchOG § 27a) and 1996 (SchOG § 15), which established integrated education in compulsory school, Austria has made an important step towards integration and inclusive education.<sup>49</sup>

Studies have shown that even great talents require support and fostering to unfold.<sup>50</sup> Just like slow learners, gifted students need to be provided with learning opportunities that match their specific abilities, interests, and modes of thinking. Learners with above-average potential for achievement require specific instruction and specially trained teachers; furthermore, the nurturing of their abilities should be integrated into everyday instruction. Only if all learners are respected as individuals with particular needs, can inclusive education really succeed.

Appreciating and promoting high ability not only ensures that the greatest potentials can be made use of for excellence and innovation, but serves as a preventive measure as well. Experiences of discrepancy are more likely if high potentials remain unidentified and receive insufficient support. An environment that responds inadequately to a gifted child's particular needs may cause serious damage to his or her development.<sup>51</sup> If the child is permanently under-challenged, the presence of such debilitating factors may lead to severe achievement deficits, avolition, and stubborn or aggressive behavior.<sup>52</sup> Talent promotion as a preventive measure may avert such dramatic individual fates of gifted children and youth.

---

<sup>49</sup> Community Integration Sonderpädagogik/Community Integration Special Needs Education (2007).

<sup>50</sup> Neubauer & Stern (2007).

<sup>51</sup> Spahn (1997).

<sup>52</sup> Europäische Kommission/European Commission (2006b).

It is essential that above-average achievement should not be a necessary condition for talent promotion. So-called underachievers often achieve at an average or even below-average level, despite high intellectual potential. Identifying talent in underachievers and eliminating the multiple causes of underachievement often requires teachers, parents, psychologists, special pedagogues, medical doctors, and child and youth psychotherapists to work hand in hand.<sup>53</sup>

Some subgroups of gifted and talented children call for particular attention with respect to identification and fostering: e.g., gifted girls, highly creative children (and here, again, creative girls in particular), children with migration backgrounds, children growing up under less-than-optimal conditions of socialization in their families, talented children suffering from learning disorders, and children who, despite high potentials, refuse to learn and achieve, or who do not receive family support.<sup>54</sup> Studies have shown that gifted girls, for instance, show lower self-esteem and have a more negative self-concept than their peers. They continue to experience the pressure from both their families and society to conform to gender-specific role expectations. It is not unusual for them to deny their own talents and academic ambitions in order to conform to the group average.<sup>55</sup> Divergent and highly creative modes of thinking shown by some gifted children may be interpreted as behavioral problems rather than high ability; likewise, underachieving children and youth from socially disadvantaged groups are often wrongly identified as less able.<sup>56</sup> Their talents can only be revealed through specific support. In a similar way, high abilities in children with learning problems require systematic identification and individual fostering.

The promotion of gifted individuals with migration backgrounds has not attracted sufficient attention yet. Often, the valuable potential of their migration experience, their multilingualism, and their ability to act in diverse cultural contexts is not appreciated.<sup>57</sup> Appropriate teaching methodologies, which value biculturalism

---

<sup>53</sup> Rost (2007).

<sup>54</sup> Butler-Por (1995).

<sup>55</sup> Reis (2004).

<sup>56</sup> Butler-Por (1995).

<sup>57</sup> Reiser (2005).



and polyglotism, are urgently needed.<sup>58</sup> Furthermore, adequate identification procedures are required; procedures that take language barriers and the diversity of cultural values and social habits into consideration, and which provide a comprehensive and differentiated picture of the abilities of children with migration backgrounds.

Children from dysfunctional families, who have not been able to develop a secure attachment relationship with their parents or caregivers, represent a particular risk group. Lacking self-confidence and self-monitoring abilities and being inclined towards aggressive and hostile behavior, along with a need for affection, these children are unlikely to benefit from standard gifted instruction. They may be scared by or unable to deal with opportunities for self-directed study, work, and research. What they need in the first place are adults (teachers, educationalists, kindergarten teachers) who are able to provide the secure attachment relationship they have been denied.<sup>59</sup>

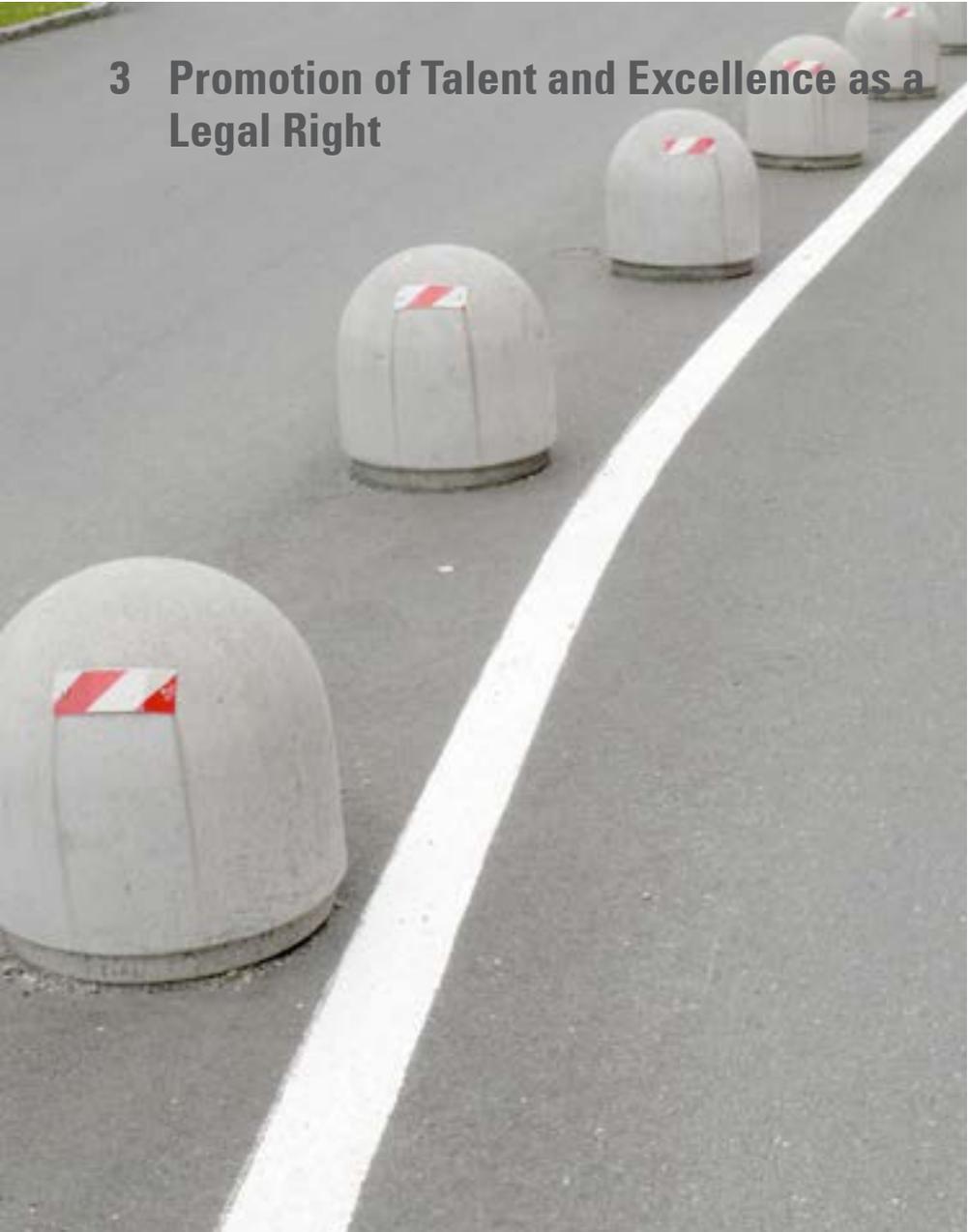
---

<sup>58</sup> Boss-Nünning (2006).

<sup>59</sup> Neufeld & Maté (2006).



### **3 Promotion of Talent and Excellence as a Legal Right**



In 1990, the UNESCO first committed to the Education for All (EFA) initiative, which was confirmed in the years 2000 and 2009. This initiative comprises six goals that the UNESCO strives to achieve by 2015. Besides improving comprehensive early childhood care and education, ensuring equal educational opportunities for girls and fighting illiteracy, the promotion of excellence is mentioned as a goal of its own. Goal 6 indicates that “[...] improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.”<sup>60</sup> “Excellence of all” as quoted here, however, should rather be interpreted as the attainment of one’s individual maximum achievement level, not as excellence in the traditional sense.

### 3.1 The Legal Basis in Elementary Education<sup>61</sup>

Promoting talent is a crucial responsibility of elementary education. Two of the Austrian provinces explicitly mention the term “talent” in their provincial laws on child education and care. Section 3, paragraph 1 of the Tyrolean Kindergarten and Day Care Act states: “(1) The duty of kindergarten is [...] to foster children’s emotional, intellectual, and physical development [...] through an education and talent promotion that is appropriate to their current developmental stage, until they enter school”. The Styrian Child Education and Care Act mentions talent promotion in the context of day care centers: “It is the duty of day care centers to offer the following extracurricular opportunities to school children: fulfillment of their academic duties; pursuit of their interests; promotion of their talents [...]” (Section 5, paragraph 3).

The Vorarlbergian Kindergarten Act stresses the significance of preschool education and fostering. For example, Section 11, paragraph 2 states: “It is the duty of preschool education to promote children’s intellectual, emotional, social, religious, ethical, and physical development. In line with personality development, every child shall be accepted, strengthened, and supported with

---

<sup>60</sup> UNESCO (2000), p. 4.

<sup>61</sup> In this White Paper, elementary education means preschool education.



## Commitment to Early Education

regard to his or her developmental stage as a whole person. In due consideration of individual modes of learning, the child's cognitive and mental abilities, social maturity, learning abilities, and willingness to learn shall be supported; [...] Furthermore, creative abilities are to be developed".

Under an agreement in accordance with Section 15a B-VG<sup>62</sup> between the Federal Republic and the Austrian provinces, a resolution to establish a uniform educational framework for all Austrian elementary educational institutions was passed in 2008. In autumn 2009, the "Supra-regional Educational Framework for Elementary Educational Institutions in Austria" took effect, representing "the provincial governments' commitment to the educational mandate of these institutions and of their value for children's educational trajectories."<sup>63</sup> Differences in young children's individual abilities and talents are referred to in several places, for instance, when children's "different interests, abilities and needs as well as [...] their various expressions and competences" are pointed out.<sup>64</sup> Furthermore, the concept of talent appears in statements on differentiation, early learning, and inclusive education.

---

<sup>62</sup> Vereinbarung gemäß Art. 15a B-VG über den Ausbau des institutionellen Kinderbetreuungsangebots und über die Einführung der verpflichtenden frühen sprachlichen Förderung in institutionellen Kinderbetreuungs-einrichtungen sowie Schaffung eines bundesweiten vorschulischen Bildungsplanes (BGBl. II Nr. 478/2008)/Agreement in accordance with Section 15a B-VG on the expansion of institutional child care services and on the establishment of compulsory early language development in childcare institutions, as well as the creation of a national education plan for preschool education (Bundesgesetzblatt/Federal Law Gazette II No. 478/2008).

<sup>63</sup> Charlotte Bühler Institut im Auftrag der Ämter der Landesregierungen der österreichischen Bundesländer, Magistrat der Stadt Wien & Bundesministerium für Unterricht, Kunst und Kultur/Charlotte Bühler Institute, on behalf of the Austrian Provincial Government Offices, the Vienna Magistrate & the Federal Ministry of Education, Arts, and Culture (2009), p. 1. [transl. TGB]

<sup>64</sup> *Ibid.*, p. 2. [transl. TGB]

## 3.2 The Legal Basis for Schools

The 1962 School Organization Act (Schulorganisationsgesetz/SchOG) set the course for a differentiated promotion of abilities in Austria. Section 2 states that the Austrian school system has the duty “to contribute to the development of young people’s predispositions [...] through an instruction, that is adapted to their current developmental stage and their educational trajectories.”<sup>65</sup>

Since the enactment of this school organization act, a great number of further laws, acts, and decrees encouraging teachers to actively promote talent and excellence have been issued.

Since 1974, the School Education Act (Schulunterrichtsgesetz/SchUG, Section 26) offers gifted and talented students the opportunity to skip grades. At first, this was only possible within one type of school (initially from ISCED level II on, later on in primary school as well). Since September 2006, grade skipping at the so-called “interfaces” is admitted as well (SchUG, Section 26a). This means that, for instance, a child can skip from grade 3 of primary school to grade 1 of secondary school. Subject to the suitability and potential of a child, he or she can skip grades three times during his/her school career. One criterion, however, is that nine years of compulsory schooling must be fulfilled (SchUG Section 26, paragraph 3).

Since September 2006, statutory regulations concerning early school entry have been taking better account of the needs of gifted and talented children. The dispensation period for children who have not yet attained the age of compulsory schooling was extended, i.e., children whose development is significantly advanced may enter school if they complete their sixth year by March 1 (before 2006: December 31) of the following year (Act of Compulsory School Attendance/Schulpflichtgesetz, Section 7).

Electives as well as school clubs and societies were mentioned explicitly as ways of promoting particularly talented and interested students in a 1988 revision of the School Organization Act (SchOG Section 6, paragraph 4).

---

<sup>65</sup> Transl. TGB

## Staying Away from School for Important Reasons

### Ministerial Decrees on the Promotion of Giftedness and Talent:

- Better Fostering
- Initiative 25+: Individualizing Instruction
- Establishing a Holistic and Creative Learning Culture in the Schools
- General Decree on the Promotion of Giftedness and Talent

Section 45 of the School Education Act states that staying away from school “for important reasons” can be authorized by the class teacher or the principal. In a decree issued by the Federal Ministry in 1998,<sup>66</sup> this section was interpreted in favor of promoting the gifted and talented. Since then, attending university courses is deemed “an important reason” for gifted and talented students to stay away from school. Thus, students can attend university courses during class time. The attendance of these courses can be credited to the respective study after graduation.

The decree “Better Fostering”, which was issued to all schools in 2005, requires all students to be fostered individually, which represents a major prerequisite for the promotion of talent and excellence. Constructive management of student diversity and focused individualization of learning processes shall contribute to the optimal development of all types of student potential. Schools are called on to specify their principles of differentiation and individualization in a general educational framework. This decree also mentions the promotion of able students: “A LOCATION-BASED SUPPORT FRAMEWORK shall include all current and future action, such as [...] measures to promote gifted students.”<sup>67</sup>

The decree “Initiative 25+: Individualizing Instruction”, which was issued to all schools in June 2007, emphasizes once more the importance of individualization for managing heterogeneity and diversity, placing students’ individual personality and learning prerequisites at the heart of instruction: “We define individualization as the sum of all measures of instructional methodology and learning and teaching organization which assume learning to be a personal, self-directed activity of every student and which are intended to support and challenge students in accord with their personalities, their learning prerequisites, and their potentials in the best possible way. Particular attention is therefore paid to the diagnosis of skill levels, lesson planning, task design, and performance feedback.”<sup>68</sup>

<sup>66</sup> BMUK-GZ 10.060/16-I/4b/98 (1998).

<sup>67</sup> Bundesministerium für Bildung, Wissenschaft und Kultur/Federal Ministry of Education, Science, and Culture (2005; capitalization in original). [transl. TGB]

<sup>68</sup> Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry for Education, Arts, and Culture (2007a). [transl. TGB]

A decree entitled “Establishing a Holistic and Creative Learning Culture in the Schools”, which was issued to schools in 2009, is explicitly dedicated to the promotion of creativity. Since the promotion of creativity is closely related to the promotion of talent and excellence, many points of contact can be found. Learning “with all senses”, focusing on the “head, heart, and hand” as well as an interdisciplinary approach are crucial aspects of an organization of teaching that strives for a talent-friendly, holistic, and creative learning culture.<sup>69</sup>

The “General Decree on the Promotion of Giftedness and Talent”, which was issued to all Austrian schools in August 2009, is explicitly devoted to talent development. The decree describes giftedness and talent as potentials for outstanding achievement, which can only develop in interaction with personality and environmental factors. The duty of schools is to foster these potentials. As basic principles for the promotion of giftedness and talent, the decree mentions focusing on strengths and interests, accepting and supporting giftedness in an unbiased way, using a variety of fostering measures, and integrating the promotion of giftedness and talent into the overall school culture. In-class fostering includes the identification of characteristics that are relevant to giftedness and talent, the application of concrete educational measures, and providing performance feedback in a way that enhances motivation. Wherever possible, parents should be involved into fostering activities.<sup>70</sup>

---

<sup>69</sup> Bundesministerium für Unterricht, Kunst und Kultur/ Federal Ministry for Education, Arts, and Culture (2009a).

<sup>70</sup> Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry for Education, Arts, and Culture (2009b).



### 3.3 The Legal Basis for Tertiary Education

#### Training Artistic and Scientific Abilities to the Highest Levels

The Higher Education Act (2005) established talent promotion at teacher training colleges. As pointed out by Section 9, paragraph 6, considering the needs of particularly able and interested students shall be the guiding principle.

Besides providing pre-professional education and professional qualification, universities have the responsibility to “train artistic and scientific abilities to the highest levels” (Higher Education Act 2002, Section 3) and furthermore to provide for the “development and promotion of young scientists and artists” (*ibid.*). This can certainly be interpreted in the sense of talent and excellence promotion.

Regarding individualization of learning processes and lifelong learning, a key requirement is that credit be given for qualifications earned outside formal education and for competences acquired through informal ways of learning (e.g., self-study). In the interest of acceleration, Austrian universities offer their students the possibility to request credit for examinations passed successfully at higher vocational schools, music high schools, or high schools focusing on other arts (Higher Education Act 2002, Section 78, paragraph 1). Furthermore, “scientific work at companies or non-university research institutions providing for pre-professional scientific training” can be acknowledged as equivalent to an exam (Higher Education Act 2002, Section 78 paragraph 3).

### 3.4 The Legal Basis for Out-of School and Adult Education

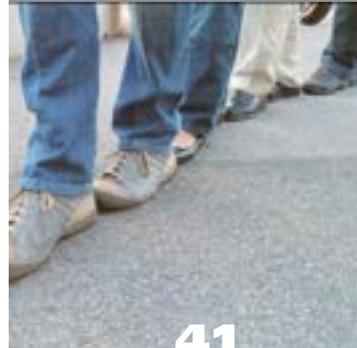
The various Austrian Province Acts on the regulation of music schools provide a positive example of how the promotion of talent and excellence can be established at out-of-school educational institutions. For instance, Section 1, paragraph 2 of the Upper Austrian Music Schools Act (which shall be presented here as a generic example) states that “the goal of the Upper Austrian Music School System is to provide access to musical education for a large part of the population; to prepare highly gifted and talented people for the highest levels of musical education; and to encourage people to make music together.”<sup>71</sup>

The 1973 Federal Act on the Promotion of Adult Education and of the Public Library Systems states that institutions and activities “targeting the acquisition of knowledge and skills as well as the ability and willingness to judge and act responsibly, and the development of personal strengths”<sup>72</sup> (Section 1, paragraph 2) should be supported.

---

<sup>71</sup> Transl. TGB

<sup>72</sup> Transl. TGB



## 4 Fields of Action



Numerous changes and adaptations at the systemic level will be necessary for the Austrian education system to master the “key challenges and goals” of the promotion of talent and excellence outlined in Chapter 2. “At a systemic level” means that taking isolated steps in the respective fields of action, e.g., elementary educational institutions, schools, or universities, will not suffice. Rather, all institutions concerned must join in a coordinated effort so that, by being in agreement on common objectives and a common vision, they can fulfill their duty of developing talent and excellence.

In the following, some sample suggestions will be presented on how to implement the objectives of talent and excellence promotion in the individual fields of action. Because specific implementations always need to consider individual characteristics and circumstances, these suggestions should be understood as guidelines to be modified or even complemented in a suitable way by the protagonists on site.

## 4.1 Developing Networks

To implement measures of promoting talent and excellence all over Austria and to make them accessible to all citizens, a coordinated network of contact points and competence centers is required. This would help create synergies and avoid unnecessary duplications. Numerous institutions in Austria deal with the development of talent and excellence; what needs to be improved, though, is their integration into an efficient network.

The following institutions can be considered the pillars for developing talent and excellence in Austria: the authorities concerned with the promotion of giftedness, talent, and excellence at the Austrian Federal Ministry of Education, Arts, and Culture and at the Federal Ministry of Science and Research; the “Task Force for Giftedness Research and Gifted Education”; the Austrian Research and Support Center for the Gifted and Talented; the Federal coordination office for the promotion of giftedness and talent at teacher training colleges; the provincial coordinators for gifted education; and, furthermore, regional coordinators, people in charge at schools, relevant associations, and international cooperations can be considered.

**A Coordinated  
Network Creates  
Synergies  
and Avoids  
Unnecessary  
Duplications**



In 1996, the Austrian Federal Ministry of Education, Arts, and Culture established a unit responsible for the promotion of giftedness and talent.

By the end of the 1990s, the presidents of the Provincial School Boards appointed people in charge for the promotion of giftedness and talent in their respective provinces, who subsequently became established as provincial coordinators. Formally, the network between the provinces is guaranteed by annual meetings.<sup>73</sup> The coordinators

- counsel gifted students and their parents;
- counsel school boards, school teams, and institutions;
- support school development;
- organize (supra)regional programs for the gifted and talented, such as summer academies;
- organize events for teachers' professional development;
- coordinate gifted and talented programs in their respective provinces;
- cooperate at a nationwide level;
- engage in public relations.

In cooperation with the provincial coordinators and the schools concerned, school psychologists working for the Provincial School Boards offer diagnostics and psychological counseling.

The Austrian Research and Support Center for the Gifted and Talented (Österreichisches Zentrum für Begabtenförderung und Begabungsforschung, ÖZBF) was founded as an association in 1999 and is funded by the Austrian Federal Ministry of Education, Arts, and Culture, and the Ministry of Science and Research. It stimulates innovative programs for the promotion of giftedness and talent. As a center operating nationwide, the ÖZBF

- offers measures for quality assurance;
- develops and evaluates innovative programs for gifted and talented in the context of research projects;
- ensures that research results are transferred into educational practice;

---

<sup>73</sup> Köhler (2007).

- organizes conferences and symposia;
- provides information platforms (e.g., teaching resources, e-learning platforms);
- offers advanced training for promoting giftedness and talent and supports seminars and workshops at teacher training colleges and universities;
- develops information material for educators and schools;
- develops specific didactic approaches for the promotion of the gifted and talented;
- develops procedures for educational assessment and diagnostics;
- initiates and coordinates international co-operations, e.g., iPEGE (International Panel of Experts for Gifted Education).

In 2008, the “Task Force for Giftedness Research and Gifted Education” was founded as a competence team across units and ministries. The task force is a committee currently made up of ten members from the Ministry of Science and Research, the Ministry of Education, Arts, and Culture, and the Austrian Research and Support Center for the Gifted and Talented. The committee members meet several times a year to develop strategies for the promotion of giftedness and talent across ministries in the light of current developments in education and educational policy. The committee’s main concern is to continuously stimulate and advance the promotion of talent and excellence, starting in the families and at elementary educational institutions, and including school and tertiary education as well as research activities. Current efforts target the following issues in particular:

- to link educational institutions;
- to promote programs for quality development in educational institutions;
- to stimulate research on giftedness and talent in Austria;<sup>74</sup>
- to establish networks with key projects and initiatives of the two ministries.

---

<sup>74</sup> Hartel (2009b).





Both at the Federal Ministry of Science and Research and at the Federal Ministry of Education, Arts, and Culture, members of the Task Force have been entrusted with agendas of talent and excellence development within their spheres of action.

Since 2009, the “Federal Coordination Center for the Promotion of Giftedness and Talent at Teacher Training Colleges” (“Bundeskoordinationsstelle für Begabungs- und Begabtenförderung an Pädagogischen Hochschulen”, BFPH) has been in operation. The center, which is an institution of the Federal Ministry of Education, Arts, and Culture and located at the Vienna Teacher Training College, considers itself as a hub and coordination center for initiatives in the field of talent promotion at the institutes of Austrian teacher training colleges. Among other things, their work emphasizes

- competence initiatives and specialized networking in education, advanced training, and research;
- cooperation and networking at a national and regional level;
- planning and implementing national and regional events to stimulate nationwide initiatives;<sup>75</sup>
- the development of a core curriculum for courses on the promotion of giftedness and talent at teacher training colleges, in cooperation with college representatives.

Some provinces have successfully established commissioners for the promotion of giftedness and talent at individual schools. In other provinces, regional coordination offices have been created. These individuals

- develop and coordinate programs for the gifted and talented in the schools;
- help colleagues identify and nurture gifted and talented students in their classes;
- support their school(s) in developing a school profile tailored to the fostering of giftedness and talent;

---

<sup>75</sup> Bundeskoordinationsstelle für Begabungs- und Begabtenförderung an Pädagogischen Hochschulen/Federal Coordination Center for the Promotion of Giftedness and Talent at Teacher Training Colleges (undated).

- are the people in charge for students and parents for issues of talent promotion;
- are the people in charge for the competence teams within the respective province;
- disseminate the objectives of talent promotion among the schools.

Numerous associations in Austria are devoted to the promotion of giftedness and talent. Partly, they are located at official institutions, such as the Provincial School Boards; partly, they are private associations operating at a regional or national level.

Some sample institutions will be presented in the following:

- The Austrian Association of Gifted Kids (“Österreichischer Verein hochbegabter Kinder”, ÖVHK) offers counseling for the parents of gifted children and youth.
- The association “Giftedness Mödling” (“Hochbegabung Mödling”) supports gifted children, adolescents, and young adults in the identification and development of their potentials.<sup>76</sup>
- The “Thomasianum – Institute of Giftedness Research and Education, Integrative Initiatives” (TIBI) was founded in 2004 as a training, research, and counseling center. It supports students, parents, and teachers.<sup>77</sup>
- The association “Talent Foundation” (“Stiftung Talente”), as part of the “Innovative Upper Austria 2010 Plus” campaign, supports parents and educators in the identification of high ability, offers gifted and talented programs for children and youth, and provides counseling on issues related to giftedness and talent for all persons concerned.<sup>78</sup>

---

<sup>76</sup> Hochbegabung Mödling (undated).

<sup>77</sup> Thomasianum, Institut für Begabtenförderung und Begabungsforschung, Integrative Initiativen (undated).

<sup>78</sup> Verein Stiftung talente (undated).





International co-operations offer a view from the outside, new know-how and valuable connections for joint projects:

- Programs by the European Union help link initiatives fostering talent and excellence and contribute to an exchange of new findings of giftedness research in Europe. “eVOCATION” and “PACT:GT” are examples of EU projects concerned with the promotion of giftedness and talent in particular. In the context of the program “eVOCATION”, a training and professional development program for teachers promoting giftedness and talent was developed as a cooperation of several universities and schools from seven European countries (the Netherlands, Germany, Slovakia, Poland, Austria, France, Switzerland). The goal of project “PACT:GT – Parental Support and Development for the Parents of Gifted & Talented” was to train parents of gifted children in seminars. The seminars were designed by the British parent counseling service National Association for Gifted Children (NAGC), the Ankara Science and Arts Center in Turkey and the Austrian Research and Support Center for the Gifted and Talented.
- Co-operations with Central and Eastern European countries are of great value for successful European integration. Initiating joint educational projects can open paths towards economic, social, and cultural affinity. In 2005, the Central Eastern European Forum (CEE Forum) was founded, which comprises representatives from the educational ministries, diverse educational psychological counseling centers, and teacher professional development centers from Austria, Poland, Slovakia, Slovenia, the Czech Republic, Hungary, and Croatia. Annual meetings help ascertain content-related and institutional sustainability.<sup>79</sup>
- The iPEGE (International Panel of Experts for Gifted Education) unites representatives from eleven different German, Swiss, and Austrian institutions. The members of iPEGE work on the development of standards for tertiary education on talent promotion to establish common grounds for post-graduate training programs.

---

<sup>79</sup> Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry of Education, Arts, and Culture (2007b).

## 4.1.1 Developing an Effective Network

### 4.1.1.1 Coordination within the Network

The most important concern in the field of action “networking” is to coordinate the efforts of the above-mentioned institutions to avoid overlapping responsibilities, to provide mutual information, and to make optimal use of limited resources.

An extension of the present network is desirable, particularly to include institutions concerned with related issues. In the following, some sample institutions dealing with related topics are listed:

The “Federal Institute for Education Research, Innovation, and Development of the Austrian School System” (“Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens”/BIFIE) focuses on

- quality development;
- education monitoring;
- the new standardized and competence-based high school graduation certificate (“Neue Reifeprüfung”);
- the National Education Report;
- information and counseling.<sup>80</sup>

The Austrian Center for Personality Development and Social Learning (“Österreichisches Zentrum für Persönlichkeitsbildung und soziales Lernen”/ÖZEPS) currently pursues the following tasks:

- supporting the sustainable entrenchment of methods, models, and possibilities of implementation supporting the acquisition of personal and social competence in the Austrian education system;
- networking with educational and research institutions;
- maintaining an open attitude for contacts and learning op-

---

<sup>80</sup> Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens/Federal Institute for Education Research, Innovation, and Development of the Austrian School System (undated).



- opportunities outside the educational sector;
- providing guidelines and basic information for students and teachers;
- consolidating and developing the network of trainers.<sup>81</sup>

The EPIK group (“Entwicklung von Professionalität im Internationalen Kontext”/Development of Professionalism in an International Context) is mainly involved in the following domains of teacher professionalization:

- capabilities for reflection and discourse;
- awareness of one’s profession;
- personal mastery;
- ability to manage diversity;
- collegiality.<sup>82</sup>

The “Innovations in Mathematics, Science, and Technology Teaching” (IMST) campaign mainly deals with the continued development of mathematics, science, and information technology education in Austria.<sup>83</sup>

The QIS (Quality in Schools) campaigns issued by the Austrian Federal Ministry for Education, Arts, and Culture comprise five quality domains: teaching and learning; classroom and school as living spaces; school partnerships and community ties; school management; professionalism and staff development. It aims at developing and assuring quality in the Austrian education system. With regard to talent development, the quality domain “teaching and learning” is of crucial importance.

Since many of the focal points of these institutions are directly related to the topics concerning the promotion of talent and excellence, developing a large network of all institutions presented in this chapter would benefit all parties concerned.

---

<sup>81</sup> Österreichisches Zentrum für Persönlichkeitsbildung und soziales Lernen/Austrian Center for Personality Development and Social Learning (undated).

<sup>82</sup> Entwicklung von Professionalität im Internationalen Kontext/Development of Professionalism in an International Context (undated).

<sup>83</sup> Innovationen machen Schulen top!/Innovations in Mathematics, Science, and Technology Teaching (undated).

#### **4.1.1.2 Ensuring a Clear Division of Tasks**

Currently, it may occur that people seeking counsel and support get lost in a jungle of jurisdictions. As there are highly diverse, yet insufficiently coordinated institutions for talent promotion in some parts of Austria, parents and teachers often have a hard time finding the right contact person. A coordinated and clearly visible division of tasks between individual competence centers would help prevent this issue.

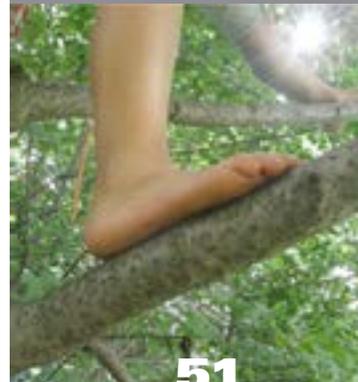
#### **4.1.1.3 Federal Coordination Centers**

Currently, the federal coordination centers seem understaffed in relation to their many duties. To ensure an efficient promotion of talent and excellence in the provinces, it is therefore recommended to increase human resources for counseling, professional development, administration, etc.

Appointing coordinators for early talent promotion would improve early fostering in the elementary sector. Ideally, these positions should be filled by experts certified in preschool gifted education.

Detailed job descriptions for positions at provincial coordination offices could help clarify the numerous demands placed on the people and institutions concerned with the promotion of giftedness and talent. The provincial competence centers should be staffed by experts from different disciplines, e.g., specialists in psychological and/or educational diagnostics; psychologists or educationalists specialized in professional counseling; clinical psychologists; experts in organization and management, school development, and teacher professional development, as well as experts in subject-specific teaching methodologies from different types of schools.

## **Increasing Human Resources in the Provinces**



#### **4.1.1.4 Nominating Commissioners at Elementary Educational Institutions and Schools**

Currently, the efforts to win commissioners for talent and excellence development directly at the schools have been successful in only a few provinces, and only for certain types of schools. In the medium run, the goal should be that people in charge are nominated in every school and in all elementary educational institutions.

Binding job descriptions and corresponding opportunities to qualify for these requirements should be made available to commissioners nationwide.

#### **4.1.1.5 International Networks**

To make better use of international expertise, it would be desirable to further expand international networks. A comparative analysis of how giftedness and talent are promoted in the countries of the European Union or the OECD, for instance, would be of great value. Likewise, cooperation with East Asian countries could provide Austria's educational landscape with new information and perspectives.

#### **4.1.1.6 Quality Assurance**

For all institutions concerned with the promotion of giftedness, talent, and excellence, binding agreements, on objectives as well as documentation and evaluation of results, should go without saying. Likewise, key players in an effective network should exhibit competences, such as the ability to work in a team and openness for the needs of the overall system.

## 4.2 Qualification

The promotion of talent and excellence begins with the motivation and qualification of the relevant agents. In the long run, educational systems may change for the better only if the education of parents, educators, and teachers is aligned accordingly.

### 4.2.1 Early Fostering and Elementary Educational Institutions

As the first and most important facilitators of the development of children's potential, parents should be considered a particular target group in the context of talent development. It therefore makes sense to attract them to specific trainings offered to strengthen parenting skills and enhance educational aspirations.

Furthermore, daycare parents should be adequately qualified for the promotion of giftedness and talent according to uniform standards that apply throughout Austria. Currently, the qualification of daycare parents is regulated individually for each province. During recent years, this decentralization has led to a variety of qualification requirements. A 300-lesson curriculum for daycare parents, outlined by an expert group appointed by the Austrian Federal Ministry of Economy, Family, and Youth, offers an opportunity for standardization. To certify this training, a corresponding quality seal is planned.<sup>84</sup>

The publication of a guideline on the nationwide educational framework for elementary educational institutions represents an important step towards the standardization of training and competence goals for children attending daycare.<sup>85</sup> This

---

<sup>84</sup> Bundesministerium für Wirtschaft, Familie und Jugend/Austrian Federal Ministry of Economy, Family, and Youth (2010).

<sup>85</sup> Vereinbarung gemäß Art. 15a B-VG über die Einführung der halbtägig kostenlosen und verpflichtenden frühen Förderung in institutionellen Kinderbetreuungseinrichtungen (BGBl I Nr. 99/2009)/Agreement according to Section 15a B-VG on the introduction of half-day free and compulsory early education in childcare institutions (Federal Gazette/Bundesgesetzblatt BGBlNo. 99/2009).

guideline, published in summer 2010 in consultation with the Federal Government and the Austrian provinces, is also binding for daycare parents.<sup>86</sup>

Educationalists at elementary educational institutions are qualified through the Training Institutes for Kindergarten Education (“Bildungsanstalten für Kindergartenpädagogik”/BAKIP). Although the basic teaching principles of these institutes state that “regarding internal differentiation [...], the children’s individual abilities and interests [...] need to be accounted for,”<sup>87</sup> this principle has hardly been taken into consideration in the respective curricula, where there is little mention of highly able children. Only in paragraph 18, “Handicraft”, describes “recognizing and bearing in mind the significance of manual training for the integration of girls and boys with diverse behaviors, talents, and special needs” as a teaching and learning goal.

In continued and advanced training, talent development is usually covered in the form of isolated individual events. Some institutions are already offering courses on talent promotion at elementary educational institutions for kindergarten teachers. It should be ensured that training courses offered at teacher training colleges in particular can be credited for other postgraduate training courses, e.g., masters programs in gifted and talented education.

#### 4.2.2 Teacher Training

Currently, teacher training colleges and universities are not obliged to include the promotion of giftedness, talent, and excellence into their curricula. Although a curriculum on gifted education has been proposed for the training of teachers working in compulsory education,<sup>88</sup> with some teacher training colleges having included (at least part of) the competences listed therein into their training

---

<sup>86</sup> Charlotte Bühler Institut im Auftrag des BMWFJ/Charlotte Bühler Institute, on behalf of the Austrian Federal Ministry of Economy, Family, and Youth (2010).

<sup>87</sup> Lehrplan der Bildungsanstalt für Kindergartenpädagogik/Curriculum of the Training Institute for Kindergarten Education (2004), p. 4. [transl. TGB]

<sup>88</sup> Weilguny, Friedl, Müller-Opplinger, Schmid, & Stadelmann (2006).

modules, giftedness and talent research and education is by no means an integral part of the curricula at teacher training colleges. The promotion of talent and excellence should also be emphasized further in the education of prospective medium- and higher-track teachers at general and vocational secondary schools.

In teachers' continued and advanced training, a great number of approaches to making the promotion of talent and excellence a matter of concern for teachers have been proposed – for instance, special courses on gifted and talented education at teacher training colleges, or diploma courses leading to a “Specialist in Gifted Education” degree awarded by the European Council for High Ability (ECHA).<sup>89</sup> Occasionally, universities offer courses on gifted and talented education as well. The Danube University Krems, for instance, offers Master programs on this topic. Furthermore, a curricular framework for the development of regional training courses on gifted and talented education at teacher training colleges has been proposed.

In 2007, an international group of experts (International Panel of Experts for Gifted Education – iPEGE), headed by the Austrian Research and Support Center for the Gifted and Talented, started out to develop international quality criteria for continued and advanced teacher training in gifted and talented education.<sup>90</sup> These criteria are supposed to help improve the numerous advanced education offers, which often differ strongly with respect to their goals and contents and which are not always supported scientifically. Other iPEGE publications include a description of professional training courses on gifted and talented education in the German-speaking countries as well as examples of course modules from Master programs.

Besides this existing range of further training opportunities, however, the focus should be to provide a systematic, continuous, and practical teacher training – in terms of “learning and training on the job”. Studies have shown that brief, isolated training units have

---

<sup>89</sup> The report of the Austrian Federal Ministry of Education, Arts, and Culture (2007b) provides a comprehensive list of degrees awarded by these academies and ECHA.

<sup>90</sup> iPEGE (2009).



## Advanced Teacher Training as Systematic Training on the Job

little impact on teachers' attitudes and instruction, whereas block seminars running over several (at least 3–4) days with follow-up training sessions and practical assistance, seem to be more effective and more sustainable.<sup>91</sup> Therefore, such advanced trainings should be conducted in close contact with the teachers' individual schools and adapted to the immediate needs of the school and the teaching staff. Teacher trainings should be tailored to specific projects and programs scheduled by teachers and schools.

Besides knowledge about educational diagnostics and internal differentiation, advanced teacher training should by all means include the issues of cooperating with parents and dealing competently with legal frameworks. Regular workshops with school law experts could not only help provide better legal counseling of teachers and school principals, but also make clear to experts that in many instances, the law needs to be adapted to changed circumstances in education. A guideline for teachers about the legal framework of talent and excellence promotion would be a desirable outcome of such cooperation.

Advanced teacher trainings should also be accompanied by professional incentives – particularly at schools: The attainment of a certain qualification level (as acquired through basic, continued, or advanced training) being linked to certain functions in the system will create its own dynamic of training motivation. In order to develop schools towards talent and excellence promotion, it would be helpful to promote middle management at schools and to set up counseling teams. Scientific results agree that creating professional incentives for teachers is a meaningful practice.<sup>92</sup>

To establish talent and excellence development as an integral part of school, continuous training for principals on the promotion of talent, and excellence should be strived for as well. Specific educational offers, targeting principals, should already be integrated into continued and advanced teacher training. Sound knowledge about leadership and organizational development is important for teachers in middle management as well and may also create incentives for future candidate school principals.

---

<sup>91</sup> Landert (1999); Lipowsky (2010).

<sup>92</sup> Mönks, Peters, & Pflüger (2003), p. 93.

### 4.2.3 Psychology

The 233<sup>rd</sup> administrative order on basic training for senior service in school psychology, enacted in 2000, states that training should provide “knowledge about psychological counseling, assessment, and expert counseling and the applications of these areas, in particular [...] with regard to individual (educational) needs and specific abilities and talents.”<sup>93</sup> Furthermore, school psychologists should be given opportunities to develop and increase their competences in relevant domains through advanced training courses focusing on the promotion of talent and excellence. Especially gifted identification and psychological counseling for parents and teachers of gifted students are topics that are insufficiently addressed in current psychological degree courses.

Advanced training courses on giftedness and ability assessment and counseling for psychologists working in child and youth counseling would ensure that potentials are identified through suitable assessment procedures and that adequate interventions are initiated or recommended. A corresponding certification of psychologists having undertaken further training in talent promotion could guarantee that clients seeking counsel would be referred to qualified psychologists only.

---

<sup>93</sup> Bundesgesetzblatt für die Republik Österreich/Federal Gazette (2000). [transl. TGB]



Further Training  
on Talent and  
Excellence  
Promotion  
for School  
Psychologists

## 4.3 Research

To adequately support the promotion of talent and excellence, more research on this issue is required. Talent and excellence promotion lie at the intersection between psychological and educational research disciplines. Whereas general educational science provides the anthropological reasons why the promotion of talent and excellence is necessary, institutional support of gifted and talented education is related to school education; finally, its practical implementation in the schools would be the responsibility of didactics. Developmental psychology describes and explains the development and factors influencing the development of talent and achievement from childhood into adult age. Differential psychology identifies ability factors; and psychological assessment is concerned with diagnostic procedures that allow for the identification of highly able people. Evaluation research provides the basics required to examine the effectiveness of talent and excellence programs.

Educational psychology, the neurosciences (neurobiology, neuropsychology), and the social sciences (the concept of elite, the influence of social class on talent development, etc.) offer additional insights.<sup>94</sup> Issues concerning the social and political responsibility of the gifted are dealt with in the humanities, the cultural, and the social sciences. Approaches from sociology, politology, philosophy, but also from economy would be particularly suited to discuss the issue in more depth.

### 4.3.1 Status Quo

On behalf of the Federal Ministry of Science and Research, a map of giftedness and talent research activities in Austria was compiled in 2009. The aim of the project was to provide a detailed record and documentation of Austrian research activities in intellectual giftedness and talent in children and youth, focusing on the period between 1990 and 2009.<sup>95</sup>

---

<sup>94</sup> Hany (2007).

<sup>95</sup> Preckel, Gräf, Lanig, & Valerius (2009).

In summary, the results show that current research activities in giftedness and talent in Austria are sufficient neither in quantity nor quality. Although educational science and teaching methodology are engaged in a host of individual projects and research activities, educational and methodological research is dominated by a few individuals and hardly institutionalized.<sup>96</sup>

Universities and teacher training colleges “often do not focus explicitly on giftedness and talent research. At teacher training colleges, applied practical research prevails. Often, the methodological quality of research in education and teaching methodology is uncertain. This is also reflected in the small number of relevant publications in peer-reviewed journals. International publications are extremely rare.”<sup>97</sup>

A particular strength of Austria’s giftedness and talent research “in educational science and teaching methodology is its focus on the development and evaluation of (school-related) gifted and talented programs and teacher trainings.

The psychological giftedness research community, on the other hand, is not very large, comprising only a few individuals. Its particular strengths lie in the neuroscientific study of giftedness, talent, and high achievement as well as in giftedness and talent assessment.”<sup>98</sup>

It is striking that up to now, hardly any research on the concepts of gifted education has been proposed which focuses on the overall school system. Moreover further action is required regarding “the development and evaluation of programs for intellectually gifted preschoolers and elementary school children as well as for gifted children from culturally or economically disadvantaged backgrounds. In addition, there is an imbalance in research on gifted education favoring mathematical and scientific abilities.”<sup>99</sup> Research on the promotion of verbal abilities is still rare.

Compared to the number of existing fostering programs, too little

---

<sup>96</sup> Ibid.

<sup>97</sup> Ibid., p. 27. [transl. TGB]

<sup>98</sup> Ibid. [transl. TGB]

<sup>99</sup> Ibid., p. 28. [transl. TGB]

## Giftedness and Talent Research at Austrian Universities and Teacher Training Colleges



evaluation research is being conducted. "If evaluation studies are conducted, they are mostly done by educational researchers. Here, a stronger cooperation between educational science and psychology would be warranted. The same is true for teacher training. Some topics go largely or completely unheeded in Austrian giftedness research, such as the development and evaluation of approaches to counseling or intervention, e.g., for gifted underachievers. Also, topics such as personality research or the life-span development of giftedness have yet attracted little attention."<sup>100</sup>

Regarding the enormous explanatory power of longitudinal studies in particular, it would be desirable to strengthen research efforts in this area. Creating thematic links to Swiss and German longitudinal research would be worthwhile.

With respect to existing cooperation, the rather small number of inter-site projects gives the impression that Austrian research activities on giftedness and talent consist of individual and local projects rather than constituting a research network. International cooperation is rare, too. Most cooperative activities are initiated by the Austrian Research and Support Center for the Gifted and Talented.<sup>101</sup> Relevant (international) networks between research institutions have furthermore been initiated by the Austrian Federal Ministry of Science and Research.

Moreover, the Austrian Federal Ministry of Science and Research has commissioned studies on media response to the concepts of talent and excellence, their political and historical acceptance as well as their change related to the values of the knowledge society and the technological revolution in its national and international context.

To facilitate educational research in the schools, schools need to rethink their ideas and attitudes about scientific research methods. Both teachers and school inspection often hold rather unfavorable attitudes against educational-psychological research

---

<sup>100</sup> Ibid. [transl. TGB]

<sup>101</sup> Ibid.

being conducted during daily school life. Assessment procedures necessary to any scientific study should not be seen as merely “lost lesson time” by teachers, or as politically questionable “testing of students” by school inspection authorities, but rather as a profitable way of obtaining new insights and developing quality in education.

In November 2009, a conference was organized with the goal of connecting teaching and research at universities and teacher training colleges. The aim of the conference was to create synergies in teaching and research and to provide for a mutual exchange of experiences. Cooperation between universities and teacher training colleges could make use of the resources that both institutions bring to the table for mutual benefit. To make sure research at teacher training colleges is in line with international standards, the expertise of practicing university scientists is required. Conversely, universities may benefit from the fact that teacher training colleges have access to teachers and schools, e.g., with regard to empirical education, vocational, or school development research.

#### **4.3.2 Need for Research**<sup>102</sup>

Taken together, the key research issues for the future can be summarized as follows:

Up to now, the professional learning of educationalists and the changes in their professional practice have attracted little research attention. Despite promising individual studies, there is still a lack of systematic research on the socialization and expertise development of teachers and educationalists from the perspective of adult education and vocation research. The same is true for empirically validated methodological approaches to advanced training.

We need empirical educational science to analyze our different educational institutions from a systems perspective, taking into consideration their function for society and their socio-structural

---

<sup>102</sup> Cf. Hany (2007).



## Studies on the Socialization and Expertise Development in the Teaching Professions

- Empirical Educational Research
- Research on School Development
- Research on Curriculum, Teaching, and Learning
- Diagnostic Instruments
- Longitudinal Studies Pursuing a Developmental Psychological

context as well as the economics of education. Thus, social inequities, which, to some extent, can be observed in gifted and talented education, may be identified and effectively remedied.

Schools should understand the promotion of talent and excellence not only as a random issue, but also as a key aspect of their core tasks. To anchor this task comprehensively, effectively, and sustainably in schools (which are considered as learning and self-organizing institutions), we need research on school development which is geared towards organizational sociology and psychology and which provides for approaches, methods, and procedures that enable schools to handle this task as independently as possible.

Research on curriculum, teaching, and learning should be conducted in close cooperation with experts in the teaching methodologies. All types and levels of school lack methodologically and empirically validated learning materials, that do not only serve the goal of keeping gifted and talented students busy, but convey key problems from the disciplines of thought. Social, emotional, and philosophical-existential abilities, too, require adequate materials for their promotion in class.

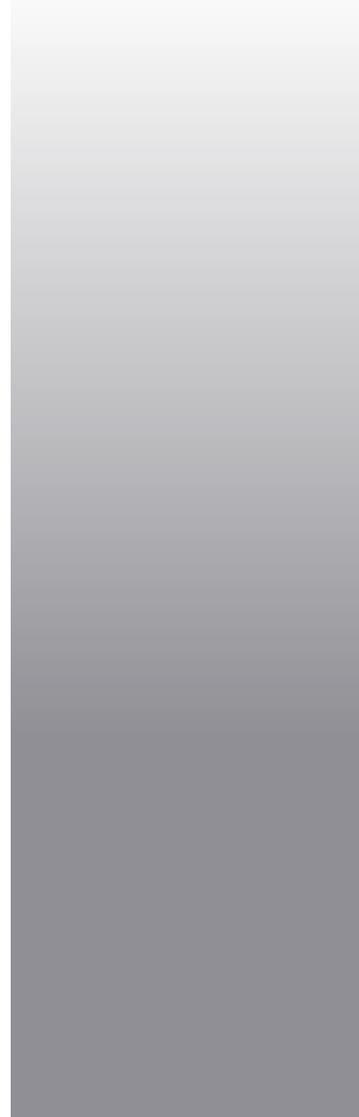
Individualization and differentiation as well as the application of adequate support measures require accurate assessment, not only of ability levels, but also of educational needs, prior knowledge, learning styles, and learning capacities. Here, educational-psychological diagnostics are called for, to provide for instruments that are able to measure status and change at all age levels.

It is not only the immediate effects of talent and excellence promotion that should be assessed. There is ample evidence that early promotion of talent and excellence unfolds its full effects after many years only. Longitudinal studies pursuing a developmental psychological perspective may present the findings required to fully appreciate the value of gifted and talented programs and to predict the long-term effects of certain measures – to mention but two examples.<sup>103</sup>

---

<sup>103</sup> Ibid.

The current relation between ability and migration should also be mentioned here, not least with a focus on brain drain (i.e., the loss of trained professionals) and brain gain (their promotion and acquisition), which have yet attracted too little research attention. Empirical studies might examine two aspects more closely: a) How can gifted and talented people with migration backgrounds (e.g., from traditional immigration countries) be successfully integrated into Austria? and b) what are the experiences of excellent Austrian performers abroad (e.g., in Western Europe or in the United States)?



## 4.4 Field of Action: Early Talent Development

### Identifying and Nurturing Preschoolers' Talents

The early identification and nurturing of abilities is of crucial importance for children's positive development.<sup>104</sup> However, there is much to catch up with regarding research, counseling, and basic, continued, and advanced training of kindergarten teachers as well as parent training in this area. This deficit is reflected in Austrian initiatives, activities, and networks focusing on talent promotion. Only some individuals, conferences, associations, or early educational institutions have addressed the identification and fostering of gifted preschoolers. Austria still remains far off a systematic and nationwide implementation of gifted and talented programs at its elementary educational institutions.

### 4.4.1 Nurturing Giftedness and Talent in the Family and at Elementary Educational Institutions

#### 4.4.1.1 Creating a Talent-friendly Culture of Learning

A child's obvious developmental acceleration, his or her salient thirst for knowledge and the early manifestation of specific interests are usually the first signs of early talent observed at elementary educational institutions.

Talent unfolds best in a culture that embraces learning and achievement, both at home and at early educational institutions. These environments should support the development of the child's personality on the one hand and stimulate and support his or her specific interests and abilities on the other. Respect for children's different talents and interests forms the basis of a culture favoring learning and achievement. To create such talent-friendly learning cultures, it is therefore crucial to establish talent promotion as a key topic of basic, continued, and advanced education of kindergarten teachers as well as to provide for specific parent trainings.

### A Culture that Embraces Learning and Achievement

---

<sup>104</sup> Perleth & Schatz (2004); Schofield (2006); Stöger, Schirner, & Ziegler (2008).

#### 4.4.1.2 Nurturing Giftedness and Talent in the Family

Parents represent a crucial target group for measures of early talent identification and nurturing. As experts in their child's development, they are usually the best source of information on particular developmental characteristics, salient interests, or early talents. To identify their child's specific interests and potentials as well as obstacles to its development at a given point in time, parents should be supported by educationalists and specifically trained psychologists. These experts have knowledge about the dynamics of developmental trajectories at preschool age and are able to identify developmental opportunities using valid test procedures and perceptive anamneses. To prepare psychologists for (early) giftedness and talent identification, it is warranted to embed the issue systematically into their basic, continued, and advanced training. In this respect, many undergraduate psychology programs have a lot to catch up with.<sup>105</sup>

Based on a support-oriented assessment of abilities and on parent-teacher feedback conferences, focused measures for the promotion of gifted preschoolers can be initiated both within and outside the family.

Parent training and counseling should be supported by counseling centers, whose portfolios on early talent promotion should cover activities like the following:

- to inform parents about their role and responsibilities as catalyzers of their children's development and talents, and to stimulate the creation of a talent-friendly home environment;
- to initiate courses and activities for preschoolers and to distribute offers from other providers;
- to organize parent trainings;
- to establish contact between parents and experts (e.g., psychologists) and between like-minded parents and/or children;
- to strengthen educational aspirations and parenting skills of parents with low educational attainment;
- to support low-income families in particular by lending resources (books, games, DVDs, work materials such as microscopes, etc.).

---

<sup>105</sup> Tischler & Hartel (2010).

Parent Training  
is Crucial

Counseling  
Centers



- Besides strengthening the institutional capacities of counseling centers and expanding offers for parent trainings, the range of courses offered for gifted and talented preschoolers needs to be extended as well.

#### **4.4.1.3 Nurturing Giftedness and Talent at Elementary Educational Institutions**

Elementary educational institutions still have much to catch up with regarding testing and implementation of support programs for children aged 0 to 6 years. Models from the school context cannot be adopted wholesale and thus need to be adapted. For example, due to their time and group structure, elementary educational institutions have no need for typical fast tracking (except for early school entrance). On the other hand, they offer ideal conditions for different types of individualization and differentiation. These two principles have been established in Austria's nationwide educational framework as guiding principles for educational work in elementary educational institutions.<sup>106</sup>

Since gifts and talents are subject to the dynamics of developmental changes typical for preschool age, the promotion of gifted and talented preschoolers should be broad, comprehensive, and integrative.<sup>107</sup> Talent development rests upon early infantile learning forms such as exploration, experimentation, play, work, invention, and creation. In the following, some models of fostering talents, which could be realized at all institutions, will be presented. They are supposed to promote abilities at a broad level and may be supplemented by enrichment programs.

Project-oriented work offers plenty of opportunities to support children of different ability and potential. The choice of topics and materials is guided by the children's individual interests and abilities and should, for the most part, be made together with

---

<sup>106</sup> Charlotte Bühler Institute, on behalf of the Austrian Federal State Government Offices, the Vienna Magistrate & the Federal Ministry of Education, Arts, and Culture (2009).

<sup>107</sup> Finsterwald & Grassinger (2006).

the children. In the context of projects, experts may be invited to kindergarten, or children may visit them at their workplaces. These experts may also mentor talented children.

Open work, which is more and more frequently practiced in kindergartens, is well suited to support the development of giftedness and talent. One key characteristic of this educational concept is that the usual home groups and the traditional spatial structure as well are dissolved. What is new is that functional rooms and workshops (e.g., spaces for building and roaming as well as for artistic creation) are designed in a way that the children can use them according to their individual interests and needs.

To develop their abilities, children also need to be given the opportunity to reflect on the status of their own knowledge and skill level. Besides discussing this issue with adults or like-minded peers, portfolios offer an opportunity for self-reflection and monitoring one's individual learning progress. Portfolios may be used for talent promotion by supporting children at enlarging their fields of interest.<sup>108</sup> Furthermore, they are just as suited for educationalists who wish to identify talents early. In addition to behavioral observations, portfolios can be used to identify interests and talents, which then constitute the basis for the development of individual fostering measures.

Talent promotion at early educational institutions also comprises educational partnerships with parents, which are based on a regular exchange on a child's development, behaviors, and (specific) needs. Counseling parents on educational measures and bringing them together with experts such as child psychologists or counselors are further responsibilities that early educational institutions have to assume in a comprehensive educational partnership.<sup>109</sup>

When dealing with gifted and talented preschoolers, parents, kindergarten and primary school teachers must free themselves of what they consider typical development, especially with regard to the acquisition of cultural techniques such as reading,

---

<sup>108</sup> Hartel (2008).

<sup>109</sup> Hartel (2009a).

### **Comprehensive and Integrative Fostering of Talents and Potentials:**

- Project-oriented Work
- Open Work
- Portfolios

### **Educational Partnerships with Parents**



writing, and arithmetic. Individualization and differentiation, as the core principles of educational offers provided at elementary educational institutions and primary school alike, allow taking a child's individual developmental progress into account.<sup>110</sup>

#### **4.4.1.4 The Transition from Kindergarten to Primary School**

The transition from kindergarten to primary school can be considered a critical event in the context of talent development. Children have to change both their learning institution and teachers. To warrant a continuous support of talent development, concerted action between a child's elementary educational institution, primary school, and parents is required. Through the exchange of information about the child's development between these three educational partners, fostering programs can be continued without interruption. It goes without saying that parental consent is required for child-related data to be passed on from one institution to another.

Early school entrance represents the first possible acceleration measure in a gifted child's educational trajectory. For early admission the child has to be presented to the school principal and a medical report by the school doctor is required. Optionally, a psychological report may be included. Before making a decision, parents often require counseling about the advantages and disadvantages of early school entry and about possible alternatives. During transition to school, as is the case with many potentially critical life events, guidance for both child and parents is recommended.

Advanced trainings, addressing both kindergarten and primary school teachers, may help them guide and counsel parents and children professionally during the transition from kindergarten to primary school, especially in the case of early school entrance.

---

<sup>110</sup> Charlotte Bühler Institut im Auftrag der Ämter der Landesregierungen der österreichischen Bundesländer, Magistrat der Stadt Wien & Bundesministerium für Unterricht, Kunst und Kultur/Charlotte Bühler Institute, on behalf of the Austrian Federal State Government Offices, the Vienna Magistrate & the Federal Ministry of Education, Arts, and Culture (2009); Wolf (2009).

#### 4.4.2 Quality Assurance and Development

Administration and legislation in the area of elementary child education and care at province level sometimes complicates the realization of uniform quality standards for all of Austria. Abiding by consistent nationwide quality standards would represent an important step towards the realization of general conditions that are both talent-friendly and conducive to the development of abilities. Stakeholders mention the following quality aspects as crucial:<sup>111</sup>

- labeling and understanding crèches, kindergartens, daycare parents, and self-governing children's groups as elementary educational institutions;
- raising training levels of educationalists at elementary educational institutions to tertiary level;
- thereby, upgrading their salaries;
- increasing the designated time for kindergarten teachers to prepare games and lessons;
- establishing a staff-child ratio that is conducive to development;
- ensuring adequate group sizes;
- anchoring talent promotion into educationalists' basic, continued, and advanced training;
- the focused promotion of children with specific interests and talents at elementary educational institutions.

In any case, these deliberations should be considered in a comprehensive and sustainable discussion of the issue.

Due to their structural and organizational characteristics, elementary educational institutions provide excellent opportunities for broad, integrated, and integrative nurturing of giftedness and talent. Time frames can be organized flexibly, allowing for free play as well as for targeted educational and supporting offers that are not limited by subject or schedule constraints. The mixed age structure at kindergarten – usually ranging from 3 to 6 years of age – facilitates various forms of (social) learning as well as diverse ways of flexible grouping.

---

<sup>111</sup> Plattform Educare – elementare und außerschulische Bildung/Plattform Educare – elementary and extracurricular education (undated).



## Structural Conditions of Kindergartens have a Significant Impact on Children's Development

## Group Size and Staff-Child Ratio Exert a Substantial Influence on Talent Development

## A Seal of Quality for Elementary Educational Institutions Complying with Established Quality Standards for Gifted and Talented Education

An institution's structural conditions, such as size of groups and rooms, staff-child ratio, and educationalists' training levels, have a significant impact on the quality of educational work and fostering activities. Children at high-quality elementary educational institutions have a developmental advantage of up to one year,<sup>112</sup> which may last up to grade five.<sup>113</sup> Furthermore, high-quality kindergartens are capable of compensating for disadvantageous developmental and learning conditions in the family.

Of all structural conditions, group size and staff-child ratio exert a most substantial influence on the development of talents and the possibilities to individualize educational offers. With increasing group size and number of children per educationalist, children's individual (educational) needs are less likely to be identified or considered. Especially children with specific (educational) needs are therefore disadvantaged by insufficient structural conditions.<sup>114</sup>

Quality standards<sup>115</sup> for early talent promotion comprise

- enabling educationalists to identify and promote potentials, interests, and talents early through basic, continuing, and advanced training;
- promoting gifted and talented children in an individually tailored and inclusive way at elementary educational institutions;
- counseling of parents by kindergarten teachers.

Elementary educational institutions, which comply with established quality standards for gifted and talented education and which ensure evaluation at regular intervals, could be awarded a seal of quality. In any case, quality development in early talent promotion should be based on scientific research and evaluation.

Societal changes are reflected in increasing demands placed on teachers at elementary educational institutions. To be able to

---

<sup>112</sup> Tietze (1998).

<sup>113</sup> Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart (2004).

<sup>114</sup> Hartmann & Stoll (2006).

<sup>115</sup> Ibid.

react professionally to new societal conditions and needs, high-quality basic, continued, and advanced training must prepare educationalists for these challenges. Reforms also have to become manifest in structural conditions on site, so that daycare centers, kindergartens, and in-home daycare providers can fulfill the high standards that are expected of them as elementary educational institutions. Such developments would also be crucial to the realization of a broad, integral, and inclusive early promotion of talent. Concomitantly, educators should be offered counseling as well as continued and advanced trainings.

Some examples of the particular (societal) challenges of our time include:

- rapid changes in family structures, the pluralization of life-styles and of associated educational styles;
- increasing social, ethnic, and linguistic diversity in children's groups, with higher demands placed on educationalists;
- rapid technical, economic, and scientific developments and the resulting changing demands on learning, competence development, and education.

According to the OECD study "Starting Strong: Early Childhood Education and Care Policy,"<sup>116</sup> it is no longer justifiable to limit the training of elementary education experts to the secondary level. Studies have shown that higher qualification of experts leads to their providing higher-quality educational offers for children.<sup>117</sup> The long-term goal should therefore be to engage only the best professionals in their field to work at elementary educational institutions. In keeping with the motto, "Only the best is good enough for the youngest,"<sup>118</sup> the qualification of education experts will be reflected in our society's level of excellence in the long run.

---

<sup>116</sup> OECD Directorate for Education (2006).

<sup>117</sup> Sylva, Melhuish, Sammons, Straj-Blatchford, & Taggart (2004).

<sup>118</sup> Stapf, as quoted in Krüger (2003). [transl. TGB]



## Higher-level Qualification of Education Specialists

## 4.5 Field of Action: School

### Separative and Integrative Interventions for Gifted and Talented Children and Youth

#### 4.5.1 Inclusive and Integrated Promotion in Class

In Austria, gifted education has long been considered a measure apart from regular schooling which, provided as extracurricular supplements, was accessible to a few students only. Separative interventions include, for instance, courses for talent development, competitions and subject-specific olympiads, or the “Early University Entrance” project. Specific schools and classes for the gifted and talented are another example of such separative measures. The Sir Karl Popper School (Vienna), for instance, was founded as a Senior High School for gifted students as part of a school experiment in 1998. The Schumpeter Business Academy, a pilot project on entrepreneurship education and talent promotion, can be mentioned as an example from the vocational domain.

However, a promotion of giftedness and talent limited to separative interventions is not enough. In the regular classroom, gifted and talented students cannot fully develop their abilities unless teaching and learning offers match their high abilities, their specific needs and interests. When promoting giftedness and talent through separation only, much potential of talented and motivated students who, for various reasons, do not have access to extracurricular programs, will be lost. Talent promotion should therefore be made available at every school and in every class.

In the “Salamanca Statement and Framework for Action on Special Needs Education”, the UNESCO clearly committed to inclusive education: “[...] schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized areas or groups.”<sup>119</sup>

---

<sup>119</sup> UNESCO & Ministry of Education and Science Spain (1194), p. 6.

Numerous methods and interventions that have already been successfully tested at schools with an emphasis on talent promotion<sup>120</sup> are perfectly suited for application in regular schooling. Assignments, contracting, the Revolving-Door model, mentoring and tutoring, compacting, long-term projects, and lab work serve the development of abilities and talents, as do learning diaries and learning portfolios. Various methods of acceleration and enrichment help adapt in-class educational provisions to the specific needs of gifted and talented students. Flexible learning units are well suited to account for students' individual interests and modes of expression.<sup>121</sup>

An integrated model of talent and excellence promotion includes a balanced combination of curricular (within regular classes) and extracurricular provisions. Through integrative and separative interventions, differentiation and individualization can be ensured for both high achievers and academically weak students. Grouping students flexibly according to different criteria (e.g., talents, interests, or functions within an enrichment team) may help avoid the fixation of attributes such as "gifted" or "academically weak", thus preventing isolation and labeling. Through flexible grouping, all students can be granted maximum support tailored to their individual needs.

Individualization and differentiation are based on educational-psychological assessment geared towards student development. The identification of characteristics relevant to learning and development in all students, as well as the development of and agreement on school wide objectives, are the basis of fostering and counseling or coaching.

The promotion of talents and interests should also be reflected by the use of alternative ways of describing students' performance. Portfolios, observation forms, or questionnaires on relevant prior learning supplement traditional performance evaluation. Not only the attainment of the generally prescribed learning goals, but also

---

<sup>120</sup> E.g., the Sir Karl Popper School in Vienna ([www.popperschule.at](http://www.popperschule.at)) and the Deutschhaus-Gymnasium in Würzburg ([www.deutschhaus.de](http://www.deutschhaus.de)).

<sup>121</sup> Cf. Österreichisches Zentrum für Begabtenförderung und Begabungsforschung/Austrian Research and Support Center for the Gifted and Talented (Ed.) (2010).





## Comprehensive Fostering of Talent and Excellence in Class

students' individual learning progress and the quality of individual or group achievements and products should be evaluated. Non-academic abilities, creativity and productivity should be taken into account in the same way as verbal, mathematical-logical, and visio-spatial abilities.<sup>122</sup> Teachers observing and appreciating informal ways of learning can commit students to life-long learning at school already.

A comprehensive and integrated framework for the promotion of talent and excellence offers a number of advantages. Ensuring adequate fostering of gifted and talented children and youth in their regular classes allows for their "continuous personality development without serious turning points or even disruptions."<sup>123</sup> Gifted children and youth can thus remain in environments they are used to, with their peers and families. At regular schools, they can experience the full diversity of abilities and learning approaches. This experience of heterogeneity provides an important basis for the development of students' social competences, in private as well as in public.

Not all gifted students show balanced ability profiles. While gifted and talented classes and schools require high achievement in all domains, a comprehensive model, with flexible grouping and intensive differentiation, is particularly suited for the individual promotion of single abilities and talents.

Students from rural regions are usually disadvantaged with respect to fostering programs. Urban areas provide more comprehensive opportunities for talent development through their greater choice of schools with different profiles, cultural offers, training courses, or nearby universities. Students living outside university towns, for instance, are limited in their opportunities to attend university courses. Long journeys make it difficult to stay away from class for one lecture only. Integrating the promotion of giftedness and talent into regular classes, involving external experts, would lead to a greater variety of promotional offers in non-urban areas as well.

---

<sup>122</sup> Oswald & Weilguny (2005).

<sup>123</sup> Scholz (2006), p. 21. [transl. TGB]

## 4.5.2 School Development

The promotion of talent and excellence not only stimulates innovations in lesson contents and instructional design, but also in the organization of learning. Comprehensive school development is therefore a prerequisite of inclusive and integrated talent and excellence promotion. If student fostering is not institutionalized comprehensively, encompassing the entire school, the question of whether talents are developed or not is less an issue of abilities, but rather of social status.<sup>124</sup> To provide all students with adequate training and fostering, talent and excellence promotion is required as an integrated and natural part of education and schooling.

Strengthening the autonomy of school administrations benefits effective school development. Schools profit from the pedagogic, organizational, administrative, and financial freedom thus gained, which enables them to foster talent and excellence on the spot, in a way that is both efficient and tailored to the individual student. Principals must be granted the freedom to make autonomous decisions about teaching staff selection, areas of specialization, and electives, etc. Schools should have the possibility to act independently, to react flexibly to students' needs and to select site-specific areas of specialization, while assuming full responsibility for their decisions.<sup>125</sup>

Continuous school development requires professional leadership and management structures. If the principal is supported by an executive team, comprising the deputy rector as well as chief pedagogical and administrative executives, this team can specify objectives on the basis of national and regional standards, thus initiating processes of quality development. Of course, the responsible parties should have task-relevant training as well as leadership skills.<sup>126</sup>

---

<sup>124</sup> Furlan (2004).

<sup>125</sup> Stadelmann (2006) gives a more detailed description of school development comprising the four factors mentioned here.

<sup>126</sup> Industriellenvereinigung/Federation of Austrian Industries (2009).

**Autonomy of School Administrations**

**Executive Teams with Leadership Skills**

Working on a pedagogical team culture ensures continuous development of school and teaching and supports the joint development of a site-specific concept of ability development, as recommended by the “Better Fostering” decree.<sup>127</sup>

The changing working conditions of everyday school life, with an increasing number of students requiring individual support, individual study skills assistance, and behavioral coaching, need to find their way into the job descriptions of teachers. It is necessary to make individual and small-group tutoring as well as team sessions an obligatory part of teachers’ regular working time. This is the only way to ensure that the entire teaching staff takes an active part in advancing the quality of teaching, student care, and school organization.

#### **4.5.3 School Partnerships: Cooperation between Teachers and Parents**

School development requires parental involvement. If parents do not agree with the school’s educational offers and developments, or if they are insufficiently informed about them, school-based interventions will not be supported at home. It is crucial that principals and teaching staff enter an intensive dialogue with parents, thereby outlining the school’s motives for promoting talent and excellence in class, pointing out the advantages of such interventions and convincing parents of their enterprise. Furthermore, counseling services are required – for both parents and teachers – so that individual cases can be dealt with in cooperation with all those involved.

Round-table discussions at school can join the know-how of head teachers, parents, teaching staff, students, and school psychologists to make optimal use of it for individual fostering.

---

<sup>127</sup> Bundesministerium für Bildung, Wissenschaft und Kultur/Austrian Federal Ministry of Education, Science, and Culture (2005).

Information and communication offers on the part of the school include:

- regular and mandatory information to parents on their children's learning status and progress as well as on planned and initiated interventions;
- regular and verifiable information to students about fostering programs and supportive measures;
- personal consultations between parents, students, and teachers in case of learning and behavioral issues;
- parent-friendly organization of teachers' office hours and PTA meetings;
- the creation of additional meeting places and opportunities, e.g., parent cafés, or parent trainings taking place at school.<sup>128</sup>

Parents should be motivated to take an active part in their children's learning and education:

- The relationship between parents and school should be one of cooperation, concerning learning and educational activities.
- Parents should be given the opportunity to bring in valuable expert knowledge, e.g., in the context of projects.
- Parents should be consulted with regard to the development of school programs and given the possibility to help shape them.
- Structural frameworks encouraging parents' participation should be created.<sup>129</sup>

The school should be open to parents outside class time as well. Parents could make use of the school library, the classrooms (e.g., for language courses targeting parents with migration backgrounds), the sports facilities, etc. In order that schools can make use of the extensive expert and practical knowledge of people not working at school, the term "non-school members" should be redefined.<sup>130</sup>

---

<sup>128</sup> ExpertInnenkommission/Expert Commission (2008).

<sup>129</sup> Ibid.

<sup>130</sup> Ibid.



## Opening the School for Parents outside Class Time

#### 4.5.4 Quality Assurance and Development

Any successful endeavor requires continuous evaluation and improvement. Quality development requires that regular internal and external evaluations and that appropriate further training of the teaching staff in these areas are established. Besides the evaluation of school programs and student achievement, as required by national educational standards, self-evaluation of teachers is indispensable to continuous quality development.<sup>131</sup>

In order to implement goal- and resource-oriented developments, encompassing the overall system, the teaching staff needs to set mid-term goals prior to initiating the interventions to be evaluated. Especially with regard to the schools' autonomy, which is claimed for the development of a site-specific school profile, it is crucial that the Austrian Federal Ministry of Education, Arts, and Culture provide clear quality criteria as guidelines for teaching staff and principals, but also for parents and students. Meaningful and sustainable school development requires binding objectives. The ways towards achievement of these goals may then vary and be tailored to the individual schools.

The Quality Initiative on Vocational Training ("Qualitätsinitiative Berufsbildung"/QIBB) represents a cornerstone of quality control in vocational schooling. By anchoring topics relating to talent development into all mission statements and quality matrices of the different types of school, the initiative has sent out a clear signal.<sup>132</sup> Educational institutions for kindergarten pedagogy, for instance, consider both the promotion of gifted students at educational institutions and the imparting of competences for the fostering of gifted preschoolers to be desirable for later professional practice in the context of this initiative.<sup>133</sup>

---

<sup>131</sup> Rosner, Weilguny, Weixlbaumer, Hany, Perleth, & Stadelmann (2007).

<sup>132</sup> BMUKK Berufsbildende Schulen & ÖZBF/Austrian Federal Ministry of Education, Arts, and Culture – Vocational Schools & ÖZBF/Austrian Research and Support Center for the Gifted and Talented (Ed.) (2010).

<sup>133</sup> Dippelreiter (2007).

It is of great importance that quality be ensured at different levels and by different means. School development requires quality criteria, both for school organization and for inclusive or separative measures (school standards and classroom standards).<sup>134</sup> For teachers, guidelines on didactics and methods, which have proven suitable for the promotion of talent and excellence, also facilitate lesson planning. Principals and school steering committees require guidelines, about which criteria have to be fulfilled, for a school to be allowed to name “talent promotion” as a core element of its specific profile. For parent work, as well, binding criteria should be formulated.<sup>135</sup> Scientifically evaluated selection procedures for participation in separative programs may provide substantial support to teachers and other experts concerned with talent promotion, thus optimizing the effectiveness and sustainability of such programs.

The teaching staff assumes responsibility for the internal evaluation of their work by taking stock of successes and failures on a regular basis – at least once a year – and by documenting the work carried out. The results of this balance, as well as plans for the following year, should be presented to a committee comprising the school inspection and the community’s education authorities. If academic consultants are involved, they should support the school’s work with empathy and expertise and provide the teams with regular feedback on their observations.<sup>136</sup>

High-quality school wide promotion of giftedness and talent requires single interventions to be coordinated by an expert who, if possible, should be part of the local teaching staff. Voluntary in-service task forces on quality development (so-called quality circles) can help improve the school climate, performance, and motivation of all school-related stakeholders.

---

<sup>134</sup> Department for Children, Schools and Families (2005); Frost & Stock (2007).

<sup>135</sup> National Association for Gifted Children (2007).

<sup>136</sup> ExpertInnenkommission/Expert Commission (2007).

## Adjustment of Legal Frameworks

As illustrated above, several legal regulations in Austria make it possible that talent and excellence can be promoted at school. This recent positive development requires long-term protection by law. Here, the effects on the system as a whole always have to be considered. For instance: In terms of equal opportunity, all students who are interested and capable should be given access to the fostering of talent and excellence. However, the fact that students make use of such programs must not lead to an unintended dissolution of regular schooling; e.g., if, due to the concurrent program, the number of students attending regular class decreases to a level that in the long run, sustainable teaching can no longer be warranted.

## Resources

Just as any implementation of effective measures, the development of talent promotion programs requires certain financial efforts. Although personally engaged and committed staff can do a lot, the effective implementation of talent promotion depends on funding. Because additional resources for the promotion of talent and excellence cannot be provided by the Federal government in the light of the current financial situation, it is also up to the provinces to (re)route all available funds as well as (re)distribute teachers' working hours such that a systematic and sustainable promotion of talent and excellence in the schools can be ensured.

## 4.6 Field of Action: University

In the tertiary sector, three key aspects of talent and excellence promotion call for further attention. More targeted actions to identify particular abilities are needed, as well as more specific programs to promote excellence. Furthermore, academic instruction should take into greater account the needs of talented and highly motivated university students. Considering the fact that university students are specializing in individual subjects and that subject-specific competencies are thus being especially attended to, it can be assumed that universities and applied universities do indeed promote the corresponding abilities; however, the different degree programs do not foster excellence per se.

### 4.6.1 Permeability between School and University

To maximize permeability between secondary and tertiary education, cooperation between schools and universities should be strengthened. Studies (e.g., the Student Social Survey<sup>137</sup>) have shown that whether a person in Austria attends college or not often depends on his or her social class. Establishing early contact and early familiarity with college life could lower the barriers that keep gifted and talented students from educationally or economically disadvantaged backgrounds from entering tertiary education both in Austria and abroad.

For more than ten years, students have been enjoying the opportunity to attend university courses during lesson time on the basis of Section 45 of the School Education Act ("Schulunterrichtsgesetz") on absence from school "for important reasons" – courses which can be credited for regular study programs after the students' graduation from high school. Students participating in the program "Students to Universities" are waived the fees they would have to pay as non-degree students. Students from rural areas, however, are often unable to reconcile long journeys to university and regular school

---

<sup>137</sup> Institut für Höhere Studien/Institute for Higher Studies (2009).



**Maximize  
Permeability  
between Secondary  
and Tertiary  
Education**



## Cooperation between Education and Research for Schools and Universities

attendance. Closer cooperation between schools and (applied) universities could enable early access to tertiary education for these students as well. Involving experts such as professors and lecturers into the school-based promotion of gifted and talented students would benefit both the schools and the universities.

Further cooperation between university lecturers and gifted and talented students is conceivable (and desirable) in the context of “Early Science Projects” as designated in the new high-school graduation guidelines. The successful completion of such projects gives evidence for a students’ ability for autonomous scientific work and readiness for tertiary education. After consultation with their schools, highly able students could be given the opportunity to work with experts at university.<sup>138</sup>

Cooperation between education and research offers excellent opportunities for schools and universities to work together. The program “Sparkling Science”, which targets the promotion of young researchers, is especially worth mentioning. This program links schools to research institutions, teacher training colleges, and museums. A crucial characteristic of this program is that it builds real partnerships between students, teachers, and scientists, which benefit all those concerned.<sup>139</sup> It is highly recommended to make this limited term program the rule for an unlimited period of time. Such cooperation should also be promoted at upper secondary level in particular to prepare students for an academic career. Some universities have already opened their laboratories to cooperating schools, furthermore offering courses and internships during vacations for gifted and talented students. Further development of these initiatives is welcome.

---

<sup>138</sup> Bundesministerium für Unterricht, Kunst und Kultur/Austrian Federal Ministry of Education, Arts, and Culture (2011).

<sup>139</sup> BMUKK Berufsbildende Schulen & ÖZBF/Austrian Federal Ministry of Education, Arts, and Culture – Vocational Schools & ÖZBF/Austrian Research and Support Center for the Gifted and Talented (Ed.) (2010).

Another idea is to include university courses that have been completed successfully (e.g., in the context of “Students to Universities”) in students’ report cards. University courses relating directly to lesson contents could supplement or, in specific cases, even replace classes. If rules are handled flexibly, lessons in the modularized senior classes might benefit from such supplements in particular.

Conversely, (applied) universities need to provide more flexible crediting systems that acknowledge qualifications and competences acquired both within and outside school. Some models already exist in Austria. A more flexible system could also consider giving credit for extraordinary performance, as proven in competitions (e.g., “Innovative Youth”) and subject-specific olympiads.

Advanced placement courses and summer schools, which are common at U.S. universities and colleges, could serve not only as preparatory classes for university but also shorten the duration of study programs for gifted and talented students, provided these courses can be given credit for in the context of the respective program. At Austrian music universities, such preparatory courses or gifted classes are already being offered for artistically talented students. Similar approaches are conceivable for students with high abilities in the logical-numerical, verbal, technical, or social domains, too.

Last but not least, the significance of effective student consultation and a suitable introductory phase must be pointed out. Both student consultation and introductory phases could be used even more than is already the case to identify and nurture potentials, using methods which have proven particularly effective for the promotion of the gifted, such as tutoring or mentoring.

**Including  
Successfully  
Completed  
University Courses  
in Students’ Report  
Cards**

**Flexible Credit  
for Qualifications  
and Competences  
Acquired Within  
and Outside School**

**Effective Student  
Consultation  
and a Suitable  
Introductory Phase**

#### **4.6.2 Permeability between Teacher Training Colleges and Universities**

To synergize resources or to enhance flexibility and mobility, it would be beneficial in the medium run to make training and study programs from different institutions accessible to all students, to give mutual credit for certificates or ECTS credit points, and thus to make better use of lectures held at both teacher training colleges and universities than is currently the case.

Such efforts have already been undertaken with the goal of linking teacher training colleges to one another. For instance, a first conference was organized by the then newly founded Austrian Federal Coordination Office for Promoting the Gifted at Teacher Training Colleges (“Bundeskoordinationsstelle für Begabungs- und Begabtenförderung an Pädagogischen Hochschulen”) in autumn 2009. Among other things, the coordination office initiates synergies, strategies, and communication structures as a basis for growing network activities. The network provides the individual teacher training colleges with opportunities to coordinate their efforts regarding basic, continued, and advanced training in gifted education.

#### **4.6.3 Student Promotion**

Fostering measures for college and university students include the provision of better possibilities for acceleration on the one hand, and enrichment and intensified support on the other.

##### **4.6.3.1 Acceleration**

Although in principle, talent and excellence promotion should be based on a deepened and not merely a faster course of studies, more opportunities for acceleration could be created for gifted and talented students.

Some universities offer the possibility of early admission so that new students can enroll in early July already, which allows them, for instance, to participate in summer schools. Further initiatives of that kind would be desirable.

In the course of the transition to the tripartite Bachelor – Master – Ph.D. system, some universities have limited opportunities to prepone courses. Some bachelor and masters programs no longer offer this possibility at all. However, the opportunity to prepone courses would be a chance to substantially reduce the duration of study, especially for gifted students aspiring to master or Ph.D. studies. On the other hand, several Austrian universities have shown that acceleration is still possible, even within the new system. In addition, students have the possibility to enter a Ph.D. program directly after their bachelor's degree if this is granted by the respective university.

#### **4.6.3.2 Enrichment**

Occasionally, students gain their first experience with independent empirical research in the course of their diploma or master's theses only. To prepare gifted and talented students as early as possible for a future scientific career, it is necessary to involve them into research projects, even more so than in the past. Gifted and talented students should be encouraged to conduct small research projects as a part of introductory or advanced seminar courses, or to work on a study together with a professor. Financial funding of project teams consisting of senior researchers, junior researchers, and students could provide an incentive. Similar projects are already being conducted at some universities.

Providing a greater choice of specific electives for gifted and talented students would enable their early access to high-quality research, e.g., journal clubs discussing recent publications from the field.

The promotion of gifted and talented students has been supported through stays abroad for a long time. Involving leading universities from the World University Rankings (e.g., Cambridge, Harvard, the MIT, or Yale) would be particularly advantageous.<sup>140</sup> Thus, highly able students could be given the opportunity to spend time abroad at such excellent and high-

---

<sup>140</sup> The QS World University Rankings 2011/2012 – top universities (2011).

**Opportunities to  
Prepone Courses**

**Involving Students  
into Research  
Projects Early**

**Specific Electives  
for Gifted and  
Talented Students**

**Stays Abroad  
at Top-level  
International  
Universities**

## Participation in Competitions

## Mentoring and Initiatives for the Advancement of Women

performing universities while being supported by Austrian scholarships. In return, these students would give fresh impetus to their home universities in Austria.

A motivating way to promote bachelor and masters students would be to give them credit for delivering lectures or attending conferences, for teaching classes, writing scientific publications, and participating in research projects. For doctoral students, such possibilities already exist.

Universities should encourage gifted students more strongly to participate in competitions, or even launch their own competitions. Some universities offer awards to the best "Researchers of the Year". Awards for the "Junior Researcher of the Year" or the "Research Team of the Year" would provide incentives for junior researchers and research teams.

Scientific studies<sup>141</sup> confirm mentoring as one of the most effective methods to promote excellence. In terms of affirmative action, some Austrian universities have already established mentoring programs supporting female Ph.D. students and scientists. Other initiatives for the advancement of women offer consultation services or provide ideas how the professional position of women in science can be strengthened.

A greater cooperation between the alumni clubs of Austrian universities and students would give the latter the chance to inform themselves early about career opportunities and possibilities for development, to find and address mentors, and to exchange ideas on areas of interest and know-how.

In contrast to mentoring, which is understood as fostering and support through experienced partners, tutoring means the imparting of knowledge and skills through peers with similar levels of experience.<sup>142</sup> Hence, tutoring is perfectly suited to foster gifted and talented students in particular. Scientific studies on

---

<sup>141</sup> Ziegler (2007); Ericsson, Krampé, & Tesch-Römer (1993).

<sup>142</sup> Topping (2005).

the effectiveness of tutoring confirm that tutors and tutees alike benefit from such programs. Positive effects could be shown with regard to subject-specific skills and knowledge as well as social and communication skills.<sup>143</sup>

The following proposal for enhancing quality at universities was made by a former vice-director for evaluation.<sup>144</sup> Compulsory classes should not only convey knowledge and skills, but also proficiency in the assessment of quality and performance. "Wouldn't it be high time to offer specific classes [...] where the principles of quality, norms, and standards as well as evaluation and assessment are taught? At the Medical Department of Innsbruck University, for instance, citation analyses and the so-called impact factors of journals play a decisive role in applications for extensions, habilitations, and tenure; however, students and doctoral students are never made acquainted with this system, although it will play a decisive role for them once they enter their careers as research assistants."<sup>145</sup>

#### 4.6.3.3 Funding for Students

At universities, applied universities, and teacher training colleges, gifted and high-achieving students are usually supported by one-time allowances such as achievement-based scholarships or awards for masters or Ph.D. theses. This area of student funding programs should strive for even greater transparency. Despite the great number of existing scholarships, grants, and awards, information about them is not always easy to find at the individual universities.<sup>146</sup> Providing systematic information about funding options would be desirable, e.g., by establishing a contact person who is concerned with the promotion of talent and excellence at every university, by writing university newsletters, or by direct promotion of the Austrian Student Union or professors.

---

<sup>143</sup> Ibid.

<sup>144</sup> Loidl (2003).

<sup>145</sup> Ibid. [transl. TGB]

<sup>146</sup> The website <http://www.grants.at> provides a first general overview of funding options.



**Proficiency in  
the Assessment  
of Quality and  
Performance**

**Transparency in  
the Area of Student  
Funding Programs**



Centers for the  
Advancement  
of Studies and  
Foundations

Commissioners  
for Talent and  
Excellence  
Promotion at Every  
University

For a systematic promotion of the gifted and talented, universities should strive to increase the number of achievement-based stipends and to establish standardized criteria. Some universities offer such performance-based scholarships for graduation only, others per academic year.

Centers for the advancement of studies as well as foundations have great financial potential to promote excellence – not only in university students, but also in pupils, universities, and research. In Germany, twelve organizations for the promotion of young talent award scholarships to a total of about 23,000 able students.<sup>147</sup> In Austria, one such organization (ProScientia) supports 120 students, although there are about 4,000 foundations in Austria.<sup>148</sup> “The World of NGOs”, a platform supporting the tertiary sector in Austria, complains as well that only a negligible proportion of the private foundations in Austria commit themselves to the common public interest.<sup>149</sup>

#### **4.6.4 Establishing Coordinating Centers for the Promotion of Talent and Excellence**

Commissioners for the promotion of talent and excellence could be established at every university. On behalf of the respective vice-chancellorship, or to avoid diverging practices in individual cases, these people might assume the following tasks after their responsibilities have been agreed upon by “Universities Austria”:

- to compile a catalogue of the university’s objectives on the promotion of talent and excellence;
- to initiate structures and specific classes supporting talent;

---

<sup>147</sup> Plus Stipendium – Begabtenförderung im Hochschulbereich/Plus Scholarship – Promoting Giftedness and Talent in the Tertiary Sector (undated). (Scholarship programs and numbers of students funded: German National Academic Foundation: 10.500; Konrad Adenauer Foundation: 2.600; Friedrich Ebert Foundation: 2.400; Hans Böckler Foundation: 1.750; Foundation of German Business: 1.250; Cusanuswerk: 900; Evangelisches Studierendewerk Villigst e.V.: 850; Hanns Seidel Foundation: 800; Heinrich Böll Foundation: 800; Friedrich Naumann Foundation: 650; Rosa Luxemburg Foundation: 450; Ernst Ludwig Ehrlich Studienwerk: 100).

<sup>148</sup> The World of NGOs (undated).

<sup>149</sup> Ibid.

- to evaluate these actions;
- to raise awareness for talent and excellence promotion;
- to inform gifted and talented students about lectures, programs, scholarships, studies abroad, career opportunities, etc.
- to provide guidance on acceleration and enrichment for gifted and talented students;
- to cooperate with schools, economy, foundations, centers for the advancement of studies, etc.;
- to serve as a contact person for early university entrants.

#### 4.6.5 Institutes and Clusters of Excellence

It is desirable that further institutes of excellence be initiated at Austrian universities for the promotion of highly able students. The goal should be to support students of extraordinary talent specifically through internal institutes and programs. As good-practice examples have shown, this may include particular training courses, regulars' tables where specific subjects are being discussed, meetings with sponsors, coaching, and visits to partnering companies. A triangle formed by students, profit or non-profit organizations, and advisors from the universities, has proven successful.<sup>150</sup>

Besides fostering students at institutes of excellence, the promotion of cutting-edge research at clusters of excellence is a key issue in the continued development of performance excellence. The cluster-of-excellence program was jointly developed by the Austrian Federal Ministry of Science and Research and the Fund for the Promotion of Scientific Research ("Fonds zur Förderung der wissenschaftlichen Forschung"/FWF) and is headed by the latter. Within this support program, Austrian universities, in cooperation with non-university institutions, may request funding for the establishment of research units with the goal to conduct fundamental research.<sup>151</sup>

<sup>150</sup> WU Wien/Vienna University of Economics and Business (undated).

<sup>151</sup> Fonds zur Förderung der wissenschaftlichen Forschung/Fund for the Promotion of Scientific Research (2008); Bundesministerium für Wissenschaft und Forschung/Austrian Federal Ministry of Science and Research (2010).

**Establishing Talent and Excellence Promotion as Part of the Quality Control Systems of All Universities**

**Creating Incentives for Talented Graduates in Academia**

Research training groups represent a further way to promote young scientists. Although the supervision of Ph.D. students has considerably improved since doctoral programs were reorganized in line with the Bologna-Bergen Declaration, still not all Ph.D. students are organized in research training groups. As a flanking measure to structured doctoral programs, such research training groups would contribute to greater comparability and the implementation of consistent standards, thus greatly improving the training of young scientists.<sup>152</sup>

#### **4.6.6. Quality Assurance and Development**

Depending on their individual profiles and performance agreements, universities differ strongly with regard to the degree to which talent and excellence promotion are established. "Projects promoting young scientists and artists"<sup>153</sup> are being incorporated into staff development measures. "Projects advancing women"<sup>154</sup> are dealt with in the context of societal objectives. In the medium run, it would be desirable to uniformly establish talent and excellence promotion as part of the quality control systems of all universities (which applies to applied universities and teacher training colleges as well).

To avoid brain drain at Austria's universities, programs promoting young scientists and artists as well as women should be attentive to creating sufficient incentives for talented graduates in academia.

---

<sup>152</sup> Wissenschaftsrat/Science Council (2002).

<sup>153</sup> Bundesministerium für Bildung, Wissenschaft und Kultur/Austrian Federal Ministry of Education, Science, and Culture (2006), p. 2

<sup>154</sup> Ibid., p. 6.

## 4.7 Field of Action: Community

In terms of life-long learning, communities are responsible for the development of talent also, not the least because they are home to institutions where talent promotion takes place – elementary educational institutions, schools, universities, and extracurricular learning institutions such as music schools, sports clubs, nature associations, and libraries.

### 4.7.1 Arguments in Favor of Talent Promotion in the Community

Besides home and school, the community is crucial to children's and youth's lives and the development of their abilities and talents. Social facilities should be established as learning landscapes and as centers of regional identity and connectedness, representing a fixed point that young people can return to – especially in the light of frequent migration.<sup>155</sup> Children and youth feel more connected to a community which offers them opportunities for development. This applies especially to pupils attending school outside the community.

### 4.7.2 Developing a Talent-friendly Culture

The goals of a community culture fostering giftedness and talent are to develop children's and youth's social and emotional competences through participation and assumption of responsibility, and to support a learning culture, that is based on individual fostering, respectful relationships, and regional identity.<sup>156</sup>

To establish talent development in the community, it is crucial to raise awareness for this issue. The community website or local newspaper could discuss topics related to talent promotion or present highly able people, valuing their contributions to the community.

---

<sup>155</sup> Thüringer Bildungsmodell – Neue Lernkultur in Kommunen/Thuringian Model of Education – A New Learning Culture in Communities (undated).

<sup>156</sup> Ibid.

Involving  
Communities into  
Talent Promotion

Promotion of the  
Gifted and Talented  
as a Means to  
Build Loyalty to the  
Community

Developing Social  
Competence through  
Participation and  
Assumption of  
Responsibility

## Raising Awareness and Establishing a Culture Acknowledging Gifted and Talented Promotion

## Incorporating Existing Extracurricular Learning and Educational Institutions

One way to develop a culture of recognition for all types of ability would be to establish a “Day of Talent”, where various enrichment activities could be offered. Former students now filling higher positions in business, science, arts, and culture could be invited as role models and potential mentors for gifted children and youth. Such encounters may initiate networks for mentoring tandems, internships, and cooperation with companies.

An important prerequisite, for a continuous and broad promotion of talented young community citizens, is “to link the educational work of kindergartens and schools to their direct and indirect partners as well as to responsible people from all generations, institutions, organizations, and initiatives.”<sup>157</sup>

Organizations and institutions have always been places for learning and fostering. Austria is home to a great number of associations and institutions, many of which promote the development of giftedness and talent. This is as true for sports, music, culture, and youth clubs as for volunteer firefighters, scouts, the Red Cross, Friends of Children, etc. In making communities more talent-friendly, one should incorporate the great potential of existing educational and extracurricular learning institutions. Furthermore, the cooperation between various public services, associations, schools, universities, etc. may create synergies, which also benefit the respective institutions.

### 4.7.3 Possibilities of Talent Promotion for Communities<sup>158</sup>

There are numerous possibilities for a community to promote talent, such as:

- company internships;
- cooperation, e.g., between companies and elementary educational institutions, or between the community library and primary schools;
- offers for the development of young people’s talents, e.g., theater companies, philosophers’ cafés, literature associations;

---

<sup>157</sup> Ibid.

<sup>158</sup> Cf. Hany (2000).

- regional and national competitions;
- school associations: several schools within a community or a region may organize fostering classes across schools and ages, thus providing continuous opportunities for talent development across interfaces;
- cooperation between kindergarten and primary school to warrant continuous promotion of giftedness and talent;
- clubs and associations: the youth departments of clubs (sports, music, literature clubs, etc.) foster young talents successfully.
- cultural events for children and youth (provided by museums, theaters, etc.);
- cooperation between children and adults, with adults and children learning from each other, e.g.:
  - “read-aloud grannies and grandpas”: elderly citizens read to kindergarten children
  - talented students hold talks for the community
  - mentoring of talented children and youth through experts from business, science, arts, and culture
- open workshop days, where expert community citizens talk about their studies, professions, or interests to raise children’s and youths’ interests and talents;
- students actively contribute to community life, e.g., by creating a community chronicle or website or by performing a theater piece
- a wide range of sports activities: talented students often wish to train in alternative types of sports as well, e.g., fencing, dance, karate, ballet, climbing, etc.;
- workshops for creative work (possibly with a subsequent market);
- establishing a foundation funding scholarships and other projects;
- parent trainings and clubs;
- organizing summer academies and student exchanges;
- assigning a person responsible for the promotion of talent in the community.



## 4.8 Field of Action: Economy and Working World

### Today's Working World Requires Life-long Learning

Today's labor market has highly complex and multi-faceted requirements. Besides the need for professional skills and IT literacy, an increasing demand for social competences, foreign language skills, intercultural competences, and experience abroad can be observed. Responsibility, self-organization, the ability to cooperate, a willingness for lifelong learning, and maintenance of one's learning ability play an increasingly important role in today's working world. Recent scientific studies prove that above-average intelligence is not a crucial characteristic of highly successful professionals. Rather, factors like motivation, engagement, persistence, and focus, besides the learning environment, are decisive for successful careers.<sup>159</sup> In many cases, these skills need to be acquired prior to entering the workforce. The entire educational system is therefore called upon to prepare people thoroughly for the requirements of the working world. Greater transparency about acquired competences and qualifications, e.g., in the form of a "life-long portfolio", should be encouraged as well. Similar to attempts to smoothen transition between individual educational institutions at primary, secondary, and tertiary level, greater attention must be paid to facilitating the transition between the worlds of education and work.

### 4.8.1 Cooperation with Educational Institutions

Both economy and educational institutions could benefit from intensified collaboration. Such cooperation would give companies the chance to communicate what they expect of future employees to the representatives of educational institutions. Furthermore, common projects by school/university and companies to promote excellence would offer the opportunity to raise learners' interest in a company early, with the company thus gaining talented and highly motivated future employees in return. Learners, on the other hand, could gather first practical experiences early and obtain insights into different occupations, which could prove invaluable for their vocational orientation.

### Permeability and Cooperation between Economy and Educational Institutions

---

<sup>159</sup> Stamm, Niederhauser, & Müller (2009).

The following areas represent possible starting points to institutionalize cooperation between economic and educational institutions:

- Coaching with a focus on education/training and career for students at both school and university: By systematically integrating career coaching into individual educational trajectories, careers could be planned according to one's personal and professional competences, interests, and goals.
- Mentoring: Mentoring is considered a highly effective method to promote talent and excellence,<sup>160</sup> forming an important link between learners and specific professional domains. Such cooperation between mentors from professional practice and mentees from elementary educational institutions, schools, or universities would make the great resource pool of expert knowledge available for the benefit of education.
- External experts as speakers at elementary educational institutions, schools, and universities: By becoming involved as external experts at educational institutions, business representatives may offer learners practical insights into current issues of the working world, thus providing enrichment in terms of identification and development of interests.<sup>161</sup>

#### 4.8.1.1 Cooperation with Schools

At numerous schools, particularly in the vocational domain,<sup>162</sup> early contact with business enterprises is made possible by factory tours offered on a regular basis. Furthermore, many schools require their students to do a business internship. A few of these schools also allow for internships abroad which, besides providing job-specific and social skills, also help students develop their language skills and intercultural competences. Expanding this practice to the general education sector would be desirable, especially for gifted and talented students.

---

<sup>160</sup> Ziegler (2007); Ericsson, Krampe, & Tesch-Römer (1993).

<sup>161</sup> Renzulli (1997).

<sup>162</sup> All examples mentioned here are taken from: BMUKK Berufsbildende Schulen & ÖZBF/Austrian Federal Ministry of Education, Arts, and Culture – Vocational Schools & ÖZBF/Austrian Research and Support Center for the Gifted and Talented (Ed.) (2010).



Furthermore, learners have the chance to gain first practical professional experiences through project-related cooperation. At a number of locations, such cooperation between schools and companies already exists. Generally, vocational schools offer the possibility that project work, often done in cooperation with partners from out of school, be credited as partial fulfillment of a high school certificate or diploma exam. Furthermore, companies and schools cooperate in the context of competitions, such as the idea contests "Youth innovative" or the Career World Championships. Furthermore, it is often possible to acquire additional certificates through cooperation with external partners from economy as well. A stronger cooperation between businesses and general higher educational institutions through projects, competitions, and additional certificates could contribute to the development of excellence.

#### **4.8.1.2 Cooperation with the Tertiary Educational Sector**

One demand of the 2008 research dialog initiated by the Austrian Federal Ministry of Science and Research was to strengthen cooperation between economy and the tertiary educational sector (Message for the Future Nr.7: "Let's strengthen interactions between science and economy!" and Nr.8: "Let's support development in particular where research contributes to companies' success!").<sup>163</sup>

If research and business join forces, new scientific and research findings will enter into the working world. Likewise, information from the professional domain on current requirements is fed back to tertiary educational institutions. Thus, future-oriented optimization processes can be initiated that will prove beneficial to Austria as a business location. Students, as well, would profit from stronger cooperation, e.g., in the form of company projects or internships, with regard to their entry into the workforce.

---

<sup>163</sup> Bundesministerium für Wissenschaft und Forschung/Austrian Federal Ministry of Science and Research (2008).

#### **4.8.2 Foundations as a Source of Funding for the Gifted and Talented**

Many foundations support the promotion of talent and excellence. The German Karg Foundation can be mentioned as an outstanding example, as it keeps supporting the realization of innovative programs promoting talent and excellence. Investments in foundations would be most useful in Austria as well.

#### **4.8.3 Creating Specific Occupational Fields**

Both parents and teachers increasingly express a demand for educational-psychological counseling, coaching, and ability diagnostics. Creating a specific occupational field (or business) for counseling the gifted and talented could contribute substantially to furthering the development of talent and excellence.

Investments in  
Foundations



## 5 Summary



The present White Paper “Promoting Talent and Excellence” is the result of a year’s intensive work. The idea to write up a strategic paper, was proposed at a meeting of the “Task Force for Giftedness Research and Gifted Education” in Salzburg, Austria. It launched a discussion with both broad and deep impact on the multitude of topics and agents to be integrated into the process both at a national and international level.

The work in hand is a compendium, exceeding the related core areas of school and university by including fields such as kindergarten, adult education, and the economic and professional domain. All of these fields are reflected in terms of “talent and excellence”.

The presentation of this White Paper does not terminate or complete the discussion, though. Rather, it should be passed on to representative and relevant national institutions, with an invitation to add ideas and comments.

We are aware of the fact that presenting such a strategic paper, in times of tight budgets, is not only ambitious, but also ambivalent. Whatever individual suggestions from the present White Paper may be implemented in the light of the present financial situation – in any case, their realization will send an important message from the Federal ministries concerned with education, training, and science as well as from the Austrian Research and Support Center for the Gifted and Talented supported by them.

It is our collective responsibility to help develop the dynamic potentials of our (young) citizens. These gifts and talents should be developed into outstanding achievement to the broadest possible extent and thematic variety. Putting this priority into words was more than worth the step towards further promotion of giftedness, talent, and excellence made through this White Paper.

*Secretary-General SC Mag. Friedrich Faulhammer, Chairperson  
SC Kurt Nekula, M.A., Executive Vice-Chairperson*

*MR Dr. Thomas Köhler, Executive Secretary  
Mag. Dr. Andrea Fraundorfer, Executive Vice-Secretary*

A black and white photograph of a zebra crossing on a road. The crossing consists of several parallel white stripes on a dark asphalt surface. The stripes are evenly spaced and extend across the width of the road. In the bottom left corner, a small section of cobblestone pavement is visible. The text "6 References" is overlaid in the top left corner in a white, sans-serif font.

## 6 References

## Laws, Decrees, and Legal Regulations

- Absatz 14 (5a) des österreichischen Bundesverfassungsgesetzes/ Section 14 (5a) of the Austrian Federal Constitutional Act. [transl. TGB]*
- BMUK-GZ 10.060/16-I/4b/98 (1998). Ergänzung zu § 45, Abs. 4 des Schulunterrichtsgesetzes, "Fernbleiben vom Unterricht".*
- Bundesgesetz über die Förderung der Erwachsenenbildung und des Volksbüchereiwesens 1973.*
- Bundesgesetz über die Ordnung von Unterricht und Erziehung in den im Schulorganisationsgesetz geregelten Schulen (1974; seit Wiederverlautbarung 1986 Schulunterrichtsgesetz – SchUG).*
- Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005).*
- Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002).*
- Bundesgesetz über die Schulpflicht (Schulpflichtgesetz 1985).*
- Bundesgesetz vom 25. Juli 1962 über die Schulorganisation (Schulorganisationsgesetz – SchOG).*
- Bundesgesetzblatt für die Republik Österreich/Federal Gazette (2000). 233. Verordnung: Grundausbildung für den höheren schulpsychologischen Dienst. Retrieved February 24, 2010, from <http://www.schulpsychologie.at/fileadmin/upload/schulpsychologie/Ausbildungslehrgang.pdf>*
- Bundesministerium für Bildung, Wissenschaft und Kultur/Federal Ministry of Education, Science, and Culture (2005). Erlass Besser Fördern: Schülerinnen und Schüler individuell fördern und fordern. Rundschreiben No. 11/2005 (June 28, 2005).*
- Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry of Education, Science, and Culture (2007a). Erlass "Initiative "25+": Individualisierung des Unterrichts". Rundschreiben No. 9/2007 (June 19, 2007).*
- Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry of Education, Science, and Culture (2009a). Grundsatzterlass "Ganzheitlich-kreative Lernkultur in den Schulen". Rundschreiben No. 15/2009 (August 15, 2009).*
- Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry of Education, Science, and Culture (2009b). "Grundsatzterlass zur Begabtenförderung". Rundschreiben No. 16/2009 (August 24, 2009).*
- Gesetz über das Kindergartenwesen (Vorarlberg) (2010).*
- Gesetz vom 24. November 1972 über das Kindergarten- und Hortwesen (Tiroler Kindergarten- und Hortgesetz).*

Oberösterreichisches Landesmusikschulgesetz 1977.

Steiermärkisches Kinderbetreuungsförderungsgesetz, LGBl. Nr. 23/2000 (seit 22. Mai 2007 "Steiermärkisches Kinderbildungs- und -betreuungsgesetz").

Vereinbarung gemäß Art. 15a B-VG über den Ausbau des institutionellen Kinderbetreuungsangebots und über die Einführung der verpflichtenden frühen sprachlichen Förderung in institutionellen Kinderbetreuungseinrichtungen sowie Schaffung eines bundesweiten vorschulischen Bildungsplanes (BGBl. II Nr. 478/2008)/Agreement in accordance with Section 15a B-VG on the expansion of institutional child care services and on the establishment of compulsory early language development in childcare institutions, as well as the creation of a national education plan for preschool education (Federal Law Gazette/Bundesgesetzblatt II No. 478/2008).

Vereinbarung gemäß Art. 15a B-VG über die Einführung der halbtägig kostenlosen und verpflichtenden frühen Förderung in institutionellen Kinderbetreuungseinrichtungen (BGBl. I Nr. 99/2009)/Agreement according to Section 15a B-VG on the introduction of half-day free and compulsory early education in childcare institutions (Federal Gazette/Bundesgesetzblatt BGGI No. 99/2009).

## Further References

Aristoteles/Aristotle (1985). *Nikomachische Ethik. Auf der Grundlage der Übersetzung von E. Rolfes ed. von G. Bien. 4. durchges. Aufl. Hamburg: Meiner.*

BMWFJ (2010). <http://www.bmwfj.gv.at/FAMILIE/KINDERBETREUUNG/Seiten/Tagesm%C3%BCtter-v%C3%A4ter-Ausbildung.aspx> (Mind uppercase letters. No English version available).

Boss-Nünning, U. (2006). *Berufliche Bildung von Migrantinnen und Migranten. Ein vernachlässigtes Potenzial für Wirtschaft und Gesellschaft. In Friedrich-Ebert-Stiftung (Ed.), Kompetenzen stärken, Qualifikationen verbessern, Potenziale nutzen. Berufliche Bildung von Jugendlichen und Erwachsenen mit Migrationshintergrund (pp. 6-29). Friedrich-Ebert-Stiftung: Bonn.*

Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens/Federal Institute for Education Research, Innovation, and Development of the Austrian School System (n/a). *Die Kernaufgaben.* Retrieved January 12, 2010, from <http://www.bifie.at/die-kernaufgaben>.

Bundeskoordinationsstelle für Begabungs- und Begabtenförderung an Pädagogischen Hochschulen/Federal Coordination Center for the Promotion of Giftedness and Talent at Teacher Training Colleges (n/a). Retrieved June 6, 2011, from <http://www.phwien.ac.at/home/organisation-269/bundeskoordinationszentre-1430.html>.

- Bundesministerium für Bildung, Wissenschaft und Kultur (2006). *Muster der Struktur für die Leistungsvereinbarungen mit den Universitäten inkl. Arbeitsbehelf*. Retrieved February 22, 2010, from [http://www.bmwf.gv.at/wissenschaft/national/oesterr\\_hochschulwesen/das\\_oesterr\\_hochschulsystem/leistungsvereinbarungen\\_mit\\_universitaeten/](http://www.bmwf.gv.at/wissenschaft/national/oesterr_hochschulwesen/das_oesterr_hochschulsystem/leistungsvereinbarungen_mit_universitaeten/).
- Bundesministerium für Unterricht, Kunst und Kultur/ Austrian Federal Ministry of Education, Arts, and Culture (2011). 1. Säule: "Vorwissenschaftliche Arbeit". Eine Handreichung. Retrieved June 6, 2011, from [http://www.bmukk.gv.at/medienpool/20130/reifepruefung\\_ahs\\_vwa.pdf](http://www.bmukk.gv.at/medienpool/20130/reifepruefung_ahs_vwa.pdf).
- Bundesministerium für Unterricht, Kunst und Kultur/Federal Ministry of Education, Arts, and Culture (Ed.) (2007b). *Begabtenförderung und Begabungsforschung in Österreich. Bilanz und Perspektive. 1996–2006*. Wien: Hausdruckerei des BMUKK.
- BMUKK Berufsbildende Schulen & ÖZBF/Austrian Federal Ministry of Education, Arts, and Culture – Vocational Schools & ÖZBF/Austrian Research and Support Center for the Gifted and Talented (Ed.) (2010). *Begabungs- und Begabtenförderung im berufsbildenden Schulwesen. Eine Übersicht und exemplarische Darstellung*. Wien/Salzburg: Hausdruckerei des BMUKK.
- Bundesministerium für Wirtschaft, Familie und Jugend/Austrian Federal Ministry of Economy, Family, and Youth (2010). *Tagesmütter/-väter-Ausbildung*. Retrieved December 15, 2010, from <http://www.bmwfj.gv.at/Familie/Kinderbetreuung/Seiten/Tagesm%C3%BCtter-v%C3%A4ter-Ausbildung.aspx>.
- Bundesministerium für Wissenschaft und Forschung/Austrian Federal Ministry of Science and Research (2008). *Zukunftsbotschaften des Forschungsministers. Strategische Handlungsfelder für Österreichs Frontrunner Strategie 2020*. Retrieved February 22, 2010, from [http://www.bmwf.gv.at/fileadmin/user\\_upload/forschung/forschungsdialoG/ZUKUNFTSbotschaften\\_des\\_FORSCHUNGSministers\\_0808bmwf.pdf](http://www.bmwf.gv.at/fileadmin/user_upload/forschung/forschungsdialoG/ZUKUNFTSbotschaften_des_FORSCHUNGSministers_0808bmwf.pdf).
- Bundesministerium für Wissenschaft und Forschung (2010). *Exzellenzcluster ante portas*. Retrieved July 14, 2010, from <http://www.fwf.ac.at/de/publicrelations/press/pa20100408.html>.
- Bundesministerium für Wissenschaft und Forschung (Hrsg.) (2010). *40 Jahre Wissenschaftsministerium. 1970 – 2010*. Wien: BMWF.
- Butler-Por, N. (1995). *Gifted Children: Who is at risk for underachievement and why?* In M. W. Katzko & F. J. Mönks (Ed.), *Nurturing talent: Individual needs and social ability* (pp. 252-261). Assen: Van Gorcum.
- Campbell, R. J., Eyre, D., Muijs, R. D., Neelands, J. G. A. & Robinson, W. (2004). *The English Model of Gifted and Talented Education: Policy, Context and Challenges. Occasional Paper No. 1*. University of Warwick: NAGTY.





Charlotte Bühler Institut im Auftrag der Ämter der Landesregierungen der österreichischen Bundesländer, Magistrat der Stadt Wien & Bundesministerium für Unterricht, Kunst und Kultur/Charlotte Bühler Institute, on behalf of the Austrian Provincial Government Offices, the Vienna Magistrate & the Federal Ministry of Education, Arts, and Culture (2009). Bundesländerübergreifender BildungsRahmenPlan für elementare Bildungseinrichtungen in Österreich. Wien: BMUKK.

Charlotte Bühler Institut im Auftrag des BMWFJ/Charlotte Bühler Institute, on behalf of the Austrian Federal Ministry of Economy, Family, and Youth (2010). Kinder im Jahr vor dem Schuleintritt. Leitfaden für die häusliche Betreuung sowie die Betreuung durch Tageseltern. Retrieved October 26, 2010, from <http://www.bmfj.gv.at/Familie/Kinderbetreuung/gratiskindergarten/Documents/bmsfj-Leitfaden-Web.pdf>.

Community Integration Sonderpädagogik/Community Integration Special Needs Education (2007). Sonderpädagogik im Überblick. Retrieved March 26, 2007, from <http://www.cison-line.at/ueberblick.html>.

Department for Children, Schools and Families (2005). Institutional Quality Standards. Retrieved February 23, 2010, from <http://nationalstrategies.standards.dcsf.gov.uk/node/97563>.

Dippelreiter, M. (2007). Begabtenförderung im Kindergarten. In Bundesministerium für Unterricht, Kunst und Kultur (Ed.), *Begabtenförderung und Begabungsforschung in Österreich. Bilanz und Perspektive*. 1996-2006 (pp. 113-115). Wien: Hausdruckerei des BMUKK.

Entwicklung von Professionalität im Internationalen Kontext/Development of Professionalism in an International Context (n/a). Retrieved January 12, 2010, from <http://epik.schule>.

Ericsson, K. A., Krampe, R. T. & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100 (3), 363-406.

Europäische Kommission/European Commission (2006a). Empfehlung des Europäischen Parlaments und des Rates zu Schlüsselkompetenzen für lebensbegleitendes Lernen. Retrieved March 22, 2010, from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:DE:PDF>.

Europäische Kommission/European Commission (2006a). English version: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:EN:PDF>.

Europäische Kommission/European Commission (2006b). Eurydice - Spezifische Bildungsmaßnahmen zur Förderung aller Arten von Begabung an Schulen in Europa. Arbeitsdokument. Retrieved February 22, 2010, from [http://eacea.ec.europa.eu/ressources/eurydice/pdf/0\\_integral/082DE.pdf](http://eacea.ec.europa.eu/ressources/eurydice/pdf/0_integral/082DE.pdf).

- Europäische Kommission/European Commission (2006b). *new link for all languages, including German and English*: [http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/archives/082EN.zip](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/archives/082EN.zip).
- ExpertInnenkommission/Expert Commission (2007). *Zukunft der Schule: 1. Zwischenbericht*. Wien: BMUKK.
- ExpertInnenkommission/Expert Commission (2008). *Zukunft der Schule: 2. Zwischenbericht*. Wien: BMUKK.
- Finsterwald, M. & Grassinger, R. (2006). *Systemische Begabungsförderung im Vorschulbereich*. In A. Ziegler, T. Fitzner, H. Stöger & T. Müller (Ed.), *Beyond Standards – Hochbegabtenförderung weltweit*[CD-ROM]. Bad Boll: Evangelische Akademie.
- Fonds zur Förderung der wissenschaftlichen Forschung/Fund for the Promotion of Scientific Research (2008). *Programmdokument Exzellenzcluster*. Retrieved July 13, 2010, from [http://www.fwf.ac.at/de/downloads/pdf/Exzellenzcluster\\_Programmdokument.pdf](http://www.fwf.ac.at/de/downloads/pdf/Exzellenzcluster_Programmdokument.pdf).
- Frost, P. & Stock, L. (2007). *Swimming with the Tide. Quality Standards in Gifted + Talented Education*. *news&science. Begabtenförderung und Begabungsforschung*, 17, 16-17.
- Furlan, N. (2004). *Hochbegabte Jugendliche und Sommerakademien in Österreich*. Salzburg: ÖZBF.
- Gardner, H. (1999). *Intelligence reframed: Multiple Intelligences for the 21<sup>st</sup> Century*. New York: Basic Books.
- Hackman, D. A. & Farah, M. J. (2009). *Socioeconomic Status and the Developing Brain*. *Trends in Cognitive Sciences*, 13 (2), 66-73.
- Hany, E. (2000). *Muss man unterschiedlich hochbegabte Kinder unterschiedlich fördern? Vortrag im Rathaus Burscheid am 30. Mai 2000*.
- Hany, E. (2007). *Forschungsbedarf zur Begabten- und Hochbegabtenförderung*. Salzburg: ÖZBF.
- Hartel, B. (2008). *Portfolios als Instrumente der Frühförderung hochbegabter Kinder. Ein Beitrag für Kindergarten und Volksschule*. In TIBI (Ed.), *Viel-Harmonie der Begabungen. Best-Practice-Beispiele an Wiener Schulen* (pp. 26-31). Wien: TIBI.
- Hartel, B. (2009a). *Rahmenbedingungen der Begabtenförderung im Kindergarten. Oder: Der Rahmen ist das halbe Bild*. *news&science. Begabtenförderung und Begabungsforschung*, 22, 4-8.
- Hartel, B. (2009b). *Task Force Begabungsforschung und Begabtenförderung*. *news&science. Begabtenförderung und Begabungsforschung*, 23, 45.
- Hartmann, W. & Stoll, M. (2006). *Mehr Qualität für Kinder. Qualitätsstandards und Zukunftsperspektiven für den Kindergarten. Schriftenreihe des Charlotte Bühler Instituts*. Wien: ÖBV & Hölder-Pichler-Tempsky.

- Hochbegabung Mödling (n/a). Retrieved January 15, 2010, from <http://www.hochbegabung-moedling.at/index.html>.
- Hüther, G. (2008). *Schluss mit der Dressurschule! Interview für die Süddeutsche Zeitung*. Retrieved April 9, 2010, from <http://www.sueddeutsche.de/wissen/571/3105000/text>.
- Industriellenvereinigung/Federation of Austrian Industry (2009). *Schule 2020: Lernen – Wachstum – Wohlstand. 2. und aktualisierte Auflage*. Wien: Industriellenvereinigung.
- Innovationen machen Schulen top!/Innovations in Mathematics, Science, and Technology Teaching (n/a). Retrieved January 12, 2010, from <http://imst.uni-klu.ac.at/english.php>.
- Institut für Höhere Studien/Institute for Higher Studies (2009). *Studierenden-Sozialerhebung 2009: Rohbericht*. Wien: Eigenverlag.
- iPEGE (2009). *Professionelle Begabtenförderung. Empfehlungen zur Qualifizierung von Fachkräften in der Begabtenförderung*. Salzburg: ÖZBF.
- Köhler, T. (2007). Einleitung. In Bundesministerium für Unterricht, Kunst und Kultur (Hrsg.), *Begabtenförderung und Begabungsforschung in Österreich. Bilanz und Perspektive. 1996–2006* (pp. 7-10). Wien: Hausdruckerei des BMUKK.
- Köhler, T. (Hrsg.) (2008). *Potenzial und Performanz. Begabungsforschung und Begabtenförderung in Österreich und Mitteleuropa*. Innsbruck-Wien-Bozen: Studienverlag.
- Kommission der Europäischen Gemeinschaften/Commission of the European Communities (2006). *Effizienz und Gerechtigkeit in den europäischen Systemen der allgemeinen und beruflichen Bildung. Mitteilung der Kommission an den Rat und das Europäische Parlament*. Brüssel. Retrieved January 8, 2012, from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:219E:0300:0306:EN:PDF>.
- Krüger, C. (2003). *Kleine Menschen – ganz groß – schon vor der Schule. Wege zur frühen Begabungsförderung für Eltern, ErzieherInnen, LehrerInnen*. Münster: Verlagshaus Monsenstein und Vannerdat.
- Landert, C. (1999). *Lehrerweiterbildung in der Schweiz. Ergebnisse der Evaluation von ausgewählten Weiterbildungssystemen und Entwicklungslinien für eine wirksame Personalentwicklung in den Schulen*. Chur-Zürich: Verlag Rüegger.
- Lehrplan der Bildungsanstalt für Kindergartenpädagogik/Curriculum of the Training Institute for Kindergarten Education (2004). Retrieved January 11, 2010, from [http://www.abc.berufsbildendes-schulen.at/upload/655\\_ip\\_bakip\\_anl.pdf](http://www.abc.berufsbildendes-schulen.at/upload/655_ip_bakip_anl.pdf).
- Lipowsky, F. (2010). *Die Wirksamkeit von Lehrer/innenfortbildung*. *news&science. Begabtenförderung und Begabungsforschung*, 25, 4-8.

- Loidl, P. (2003). *Nachwuchsfo(e)rderung als Verpflichtung des Universitätsmanagements*. Retrieved February 24, 2010, from [http://www.nt.tuwien.ac.at/nthft/temp/oefg/text/ws\\_sicherung/Beitrag\\_4.html](http://www.nt.tuwien.ac.at/nthft/temp/oefg/text/ws_sicherung/Beitrag_4.html).
- Moles, A. A. (1971). *Informationstheorie und ästhetische Wahrnehmung*. Köln: M. DuMont Schauberg.
- Mönks, F. J., Peters, W. A. M. & Pflüger, R. (2003). *Schulische Begabtenförderung in Europa – Bestandsaufnahme und Ausblick*. Universität Nijmegen: Zentrum für Begabungsforschung.
- National Association for Gifted Children (2007). *NAGC's Quality Standards for Parental Engagement*. Übermittelt an das ÖZBF im Juni 2009.
- Neubauer, A. & Stern, E. (2007). *Lernen macht intelligent. Warum Begabung gefördert werden muss*. München: Deutsche Verlags-Anstalt.
- Neufeld, G. & Maté, G. (2006). *Unsere Kinder brauchen uns! Die entscheidende Bedeutung der Kind-Eltern-Bindung*. Bremen: Genius Verlag.
- OECD Directorate for Education (2006). *Starting Strong: Early Childhood Education and Care Policy. Country Note for Austria*. Retrieved February 12, 2012, from <http://www.oecd.org/dataoecd/14/57/36472878.pdf>.
- Österreichisches Zentrum für Begabtenförderung und Begabungsforschung – ÖZBF/Austrian Research Center for the Gifted and Talented (Ed.) (2010). *FAQs zur Begabungs- und Begabtenförderung. Die häufigsten Fragen im Zusammenhang mit (Hoch)Begabung*. Salzburg: ÖZBF.
- Österreichisches Zentrum für Persönlichkeitsbildung und soziales Lernen/Austrian Center for Personality Development and Social Learning (n/a). *Hauptaufgaben*. Retrieved January 12, 2010, from <http://www.oezepts.at/index.php?id=65>.
- Oswald, F. & Weilguny, W. M. (2005). *Schulentwicklung durch Begabungs- und Begabtenförderung. Impulse zu einer begabungsfreundlichen Lernkultur*. Salzburg: ÖZBF.
- Perleth, C. & Schatz, T. (2004). *Aus der Forschung: Zur Begabungsentwicklung und -förderung im Vorschulalter*. In H. Wagner (Ed.), *Frühzeitig fördern: Hochbegabte im Kindergarten und in der Grundschule*. Tagungsbericht (pp. 16-39). Bad Honnef: K.H. Bock.
- Plattform Educare – elementare und außerschulische Bildung/Plattform Educare – elementary and extracurricular education (n/a). *Grundlagen für ein Bundesrahmengesetz zur Qualitätssicherung in elementaren und außerschulischen Bildungseinrichtungen*. Retrieved February 22, 2010, from <http://www.plattform-educare.org/bundesrahmengesetz.htm>(accessed 22.02.2010).



- Plus Stipendium – Begabtenförderung im Hochschulbereich/Plus Scholarship – Promoting Giftedness and Talent in the Tertiary Sector (n/a). Die Werke. Retrieved February 22, 2010, from <http://www.stipendiumplus.de/de/89.php>.*
- Poostchi, K. (2006). *Spuren der Zukunft. Vom Systemdenken zur Teampraxis*. Berlin: Terra Media.
- Preckel, F., Gräf, J., Lanig, M. & Valerius, S. (2009). *Begabungsforschung in Österreich. Erstellung einer Forschungslandschaft und Skizzierung der Forschung in der Schweiz und Deutschland. Projekt im Auftrag des ÖZBF und mit Finanzierung durch das BMWF. Salzburg: ÖZBF.*
- The QS World University Rankings 2011/2012 – top universities (2011). Retrieved January 8, 2012, from <http://www.topuniversities.com/university-rankings/world-university-rankings/2011>.
- Rat für Forschung und Technologieentwicklung/Austrian Council for Research and Technological Development (2007). *Exzellenzstrategie*. Retrieved May 17, 2010, from [http://www.rat-fte.at/tl\\_files/uploads/Strategie/070810\\_exzellenzstrategie\\_screenversion.pdf](http://www.rat-fte.at/tl_files/uploads/Strategie/070810_exzellenzstrategie_screenversion.pdf).
- Rat für Forschung und Technologieentwicklung (2007). *Executive Summary in English (no full version available): [http://www.rat-fte.at/tl\\_files/uploads/Strategie/070827\\_Executive%20Summary\\_engl.pdf](http://www.rat-fte.at/tl_files/uploads/Strategie/070827_Executive%20Summary_engl.pdf)*.
- Reis, S. (2004). *The Underachievement of gifted students. Multiple frustrations and few solutions. Wege zur Begabungsförderung. Symposium vom 4.-6. Oktober 2004. Wien.*
- Reiser, J. (2005). *Hochbegabung und Migration. Labyrinth, 85, 11-12.*
- Renzulli, J. S. (1997). *How to develop an authentic enrichment cluster. Storrs, CT, The University of Connecticut: The National Research Center on the Gifted and Talented.*
- Resch, C., Samhaber, E. & Weilguny, W. (2008). *Begabungs- und Begabtenförderung als Kernelement der europäischen und nationalen Bildungspolitik. Entwurf Policy Paper. Übermittelt an das BMUKK im Dezember 2008.*
- Rosner, W., Weilguny, W., Weixlbaumer, C., Hany, E., Perleth, C. & Stadelmann, W. (2007). *Begabungs- und Begabtenförderung als Chance für die Zukunft unseres Landes: Eine Strategie für Österreich. Salzburg: ÖZBF.*
- Rost, D. H. (2007). *Underachievement aus psychologischer und pädagogischer Sicht. Wie viele hochbegabte Underachiever gibt es tatsächlich? news&science. Begabtenförderung und Begabungsforschung, 15, 8-9.*
- Ryan, R. M. & Deci, E. L. (2000). *Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. American Psychologist, 55 (1), 66-78.*

- Schlussfolgerungen des Rates vom 12. Mai 2009 zu einem strategischen Rahmen für die europäische Zusammenarbeit auf dem Gebiet der allgemeinen und beruflichen Bildung ("ET 2020")/Council conclusions of May 12<sup>th</sup>, 2009, on a strategic framework for the European cooperation in education and training ("ET 2020"). Retrieved May 17, 2010, from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:EN:PDF>.
- Schofield, N. (2006). Identified early but not supported. Possibilities that don't eventuate. In A. Ziegler, T. Fitzner, H. Stöger & T. Müller (Ed.), *Beyond Standards – Hochbegabtenförderung weltweit* [CD-ROM]. Bad Boll. Evangelische Akademie.
- Scholz, I. (2006). Integrative Hochbegabtenförderung. *LVH aktuell*, 17, 20-23.
- Smith, M. K. (2005). Happiness and education – theory, practice and possibility. In *The encyclopaedia of informal education*. Retrieved March 15, 2010, from [http://www.infed.org/biblio /happiness\\_and\\_education.htm](http://www.infed.org/biblio /happiness_and_education.htm).
- Spahn, C. (1997). *Wenn die Schule versagt: Vom Leidensweg hochbegabter Kinder*. Asendorf: Mut-Verlag.
- Spitzer, M. (2002). *Lernen: Gehirnforschung und die Schule des Lebens*. Heidelberg: Spektrum Akademischer Verlag.
- Stadelmann, W. (2003). Frühe Förderung und lebensbegleitendes Lernen im Lichte neuropsychologischer Erkenntnisse. Vortrag beim OECD-Regionalseminar für deutschsprachige Länder vom 29. September bis 2. Oktober 2003 in Wien.
- Stadelmann, W. (2006). *Begabungsförderung und Schulentwicklung: Erkennungsmerkmale einer begabungsfördernden Schule*. *news&science. Begabtenförderung und Begabungsforschung*, 14, 19-23.
- Stamm, M., Niederhauser, M. & Müller, R. (2009). *Begabung und Leistungsexzellenz in der Berufsbildung. Eine empirische Studie zu den Ausbildungsverläufen besonders befähigter Jugendlicher im Schweizer Berufsbildungssystem. Schlussbericht zuhanden der Berufsbildungsforschung des BBT*. Retrieved February 22, 2010, from [http://perso.unifr.ch/margrit.stamm/forschung/fo\\_downloads/fo\\_dl\\_proj/BLB\\_Schlussbericht\\_2009.pdf](http://perso.unifr.ch/margrit.stamm/forschung/fo_downloads/fo_dl_proj/BLB_Schlussbericht_2009.pdf).
- Stangl, W. (n/a). *Lernmotive und Lernmotivation*. Werner Stangls Arbeitsblätter. Retrieved March 15, 2010, from <http://www.stangl-taller.at/ARBEITSBLAETTER/MOTIVATION/Lernmotivation.shtm>.
- Stenberg, R. (2003). *Wisdom, Intelligence and Creativity Synthesized*. Cambridge: Cambridge University Press.
- Stöger, H., Schirner, S. & Ziegler, A. (2008). Ist die Identifikation Begabter schon im Vorschulalter möglich? Ein Literaturüberblick. *Diskurs Kindheits- und Jugendforschung*, 3, 7-24.



- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (2004). *The Effective Provision of Pre-School Education (EPPE) Project. Final Report. A Longitudinal Study Funded by the DFES 1997-2004*. Retrieved February 22, 2010, from <http://eprints.ioe.ac.uk/5309/1/sylva2004EPPEfinal.pdf>.
- Thomasianum, Institut für Begabtenförderung und Begabungsforschung, Integrative Initiativen (n/a). Retrieved January 15, 2010, from [http://www.schulamt.at/tibi/b\\_profil/0/articles/2008/02/18/a2792/](http://www.schulamt.at/tibi/b_profil/0/articles/2008/02/18/a2792/).
- Thüringer Bildungsmodell – Neue Lernkultur in Kommunen/Thuringan Model of Education – A New Learning Culture in Communities (n/a). Retrieved February 22, 2010, from <http://www.nelecom.de>.
- Tietze, W. (Ed.) (1998). *Wie gut sind unsere Kindergärten? Eine Untersuchung zur pädagogischen Qualität in deutschen Kindergärten*. Neuwied: Luchterhand.
- Tischler, K. & Hartel, B. (2010). *Intelligenz, Begabung und Kreativität in der universitären Lehre. news&science. Begabtenförderung und Begabungsforschung*, 25, 11-14.
- Topping, K. J. (2005). *Trends in Peer Learning. Educational Psychology*, 25 (6), 631-645.
- UNESCO (2000). *The Dakar Framework for Action. Education for All: Meeting our Collective Commitments. Adopted by the World Education Forum (Dakar, Senegal, 26-28 April 2000). Including Six Regional Frameworks for Action*. Paris: UNESCO. Retrieved January 8, 2012, from <http://unesdoc.unesco.org/images/0012/001202/120240e.pdf>.
- UNESCO & Ministry of Education and Science Spain (1994). *The Salamanca World Conference on Special Needs Education: Access and Quality*. Paris: UNESCO.
- Verein Stiftung talente (n/a). Retrieved October 15, 2010, from <http://www.talente-ooe.at>.
- Weigand, G. (2004). *Schule der Person. Zur anthropologischen Grundlegung einer Theorie der Schule*. Würzburg: Ergon Verlag.
- Weilguny, W., Friedl, S., Müller-Oppliger, V., Schmid, G. & Stadelmann, W. (2006). *Module und Modulbausteine zum Thema Begabungs- und Begabtenförderung für die Lehrer/innenbildung*. Salzburg: ÖZBF.
- Wissenschaftsrat/Science Council (2002). *Empfehlungen zur Doktorandenausbildung*. Saarbrücken.
- The World of NGOs (n/a). *Stiftungen in Österreich*. Retrieved February 24, 2010, from <http://www.ngo.at/recht/stift.htm>.
- Wolf, W. (Ed.) (2009). *Lehrplan der Volksschule*. Graz: Leykam.
- WU Wien/Vienna University of Economics and Business (n/a). *WU Center of Excellence*. Retrieved February 24, 2010, from <http://www.wu.ac.at/students/excellence/wucoe>.

WU Wien/ Vienna University of Economics and Business (n/a). WU Top League. Retrieved February 24, 2010, from <http://www.wu.ac.at/students/excellence/wutopleague>.

Ziegler, A. (2007). Förderung von Leistungsexzellenz. In K. A. Heller & A. Ziegler (Ed.), *Begabt sein in Deutschland* (pp. 113-138). Berlin: LIT Verlag.

Ziegler, A., Grassinger, R. & Harder, B. (2008). Begabungs-, Expertise- und Innovationsforschung. Viel versprechende Felder der Begabungsforschung. *news&science. Begabtenförderung und Begabungsforschung*, 20, 34-39.





Thanks to all our enthusiastic and creative photo models!

## **Contact**

Österreichisches Zentrum für Begabtenförderung und  
Begabungsforschung/Austrian Research and Support  
Center for the Gifted and Talented, ÖZBF

Schillerstraße 30, Techno 12  
A-5020 Salzburg

Phone: +43/662-439581

Fax: +43/662-439581-310

Email: [info@oezbf.at](mailto:info@oezbf.at)

Web: <http://www.oezbf.at>

ZVR: 553896729

The aim of this brochure is nurturing giftedness, talent, and excellence at all educational institutions. Covering the challenges and goals as well as the legal basis of the promotion of giftedness, talent, and excellence, this brochure addresses networking, qualification, and research, and describes how individual gifts and talents can be fostered within fields of action: from kindergarten and school to university, community, and economy.