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Aktuelle Positionen:
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Christiane Spiel studierte Mathematik, Geschichte und Psychologie. Stationen ihrer wissenschaftlichen Laufbahn waren das Wiener Institut für Psychologie, das Max-Planck-Institut für Bildungsforschung in Berlin und die Karl-Franzens-Universität Graz. Seit März 2000 leitet sie als Gründungsprofessorin den neu eingerichteten Arbeitsbereich Bildungspsychologie und Evaluation. Von 2004 bis 2006 hat sie als Gründungsdekanin die Fakultät für Psychologie an der Universität Wien aufgebaut. Für ihre Leistungen hat Christiane Spiel eine Reihe von Preisen erhalten: u.a. den Preis für Geistes- und Sozialwissenschaften der Stadt Wien 2006, den ersten Preis für Universitätsmanagement im Jahre 2006 (verliehen von der Donau-Universität Krems), den Best-Practice Preis für Innovative Lehre der Universität Wien 2002 und den Bank-Austria Stiftungspreis für Mentoring, 2002.

Christiane Spiel hat die Bildungspsychologie als wissenschaftliche Disziplin begründet. Die zwei zentralen Forschungsthemen im Rahmen der Bildungspsychologie, die Christiane Spiel mit ihren MitarbeiterInnen aktuell verfolgt, sind einerseits Bildungsmotivation und Lebenslanges Lernen und andererseits Aggression versus Soziale Kompetenz mit einem speziellen Fokus auf Multikulturalität. Darüber hinaus beschäftigt sie sich mit der Entwicklung von Evaluationsdesigns und führt mit ihren MitarbeiterInnen Evaluationen im Bildungsbereich durch. Die Forschungen sind in über 150 internationalen Artikeln und Buchbeiträgen publiziert.

Christiane Spiel hat ständig eine Reihe von Funktionen im Wissenschaftsbereich und an der Schnittstelle zwischen Wissenschaft und Gesellschaft inne: Sie war und ist Mitglied in International Advisory Boards, Präsidentin internationaler Gesellschaften, Herausgeberin internationaler wissenschaftlicher Journale, Gutachterin internationaler Einrichtungen und Programme sowie Mitglied zahlreicher wissenschaftlicher Programmkomitees internationaler Konferenzen. U.a. war sie Mitglied der Zukunftskommission des österreichischen Bildungsministeriums.

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Evidence-based practice: A challenge for European developmental psychology

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Abstract

In recent years the evidence-based practice movement has been seeing great gains in impact. Standards for research leading to evidence-based practice have been defined. So far, however, in the area of education standards of evidence are not extensively implemented and in most federal European policies an evidence-based reform has not been attained. The present paper advocates investing effort in evidence-based practice. In particular, the paper invites European developmental psychology and its representatives to transfer their knowledge and contribute to evidence based practice which, in turn, will foster positive child and youth development. Incipient, the paper discusses the new challenges facing universities and European scientific societies as contexts for scientific disciplines and their perspectives. Then, current directions in developmental psychology are described. The central section of the paper focuses on standards of evidence and the use of research for evidence-based practice and policy. It highlights the challenge facing European developmental psychology concerning active contribution to evidence-based practice. Two empirical examples are presented (1) illustrating that kindergarten and school are the places where evidence-based practice preventions and interventions should take place and (2) describing various steps of the transfer of basic research to evidence based practice. Finally, the contribution the European Society for Developmental Psychology can make to support the transfer of knowledge to evidence-based practice is outlined.

This paper was – in shortened form – presented as Presidential Address at the XIIIth Conference of the European Society for Developmental Psychology in Jena, Germany, at August 22nd, 2007. I would like to thank Willem Koops, Barbara Schober, and Georg Spiel for helpful comments on previous versions of the manuscript.

The evidence-based practice movement has gained greatly in impact in recent years in Anglo-American contexts in various public service areas such as medicine and agriculture, and standards for evidence and transfer to practice have been defined. However, the approaches to evidence creation and practitioner use differ significantly among scientific disciplines, public service areas, and countries. In education research and practice an extensive implementation of an evidence-base has not been achieved, and evidence-based reform has not yet been established in the federal policies of most of the European nations. The present paper focuses on new perspectives and challenges for European developmental psychology. Concretely, the paper provides arguments to bring findings from developmental research into practice and, consequently, contribute to evidence-based practice for positive child and youth development. However, the development of a scientific discipline is not only defined by the theoretical and empirical work of researchers, but is also influenced by various contexts and their interplay and changes over time. While universities provide the local contexts for multiple disciplines, scientific societies as the European Society for Developmental Psychology (ESDP) prepare European and international networks for single disciplines. However, both universities and scientific societies are embedded in and influenced by political frameworks and developments. In particular, the policy of the European Union has created challenges for Europe's universities and the need to cooperate and to develop a common vision and strategy. Therefore, when discussing challenges for a specific discipline, not only the hitherto development of the discipline but also its frameworks have to be taken into account.

The paper is structured as follows. The first section focuses on the changing world of science in Europe. Specifically, the changing role of universities is described. Consequences and challenges resulting from these changes for scientific societies are discussed. The second section briefly describes the current directions of developmental psychology. The third section of the paper focuses on standards of evidence and the use of research for evidence-based practice and policy. The intention is to highlight the challenge facing European developmental psychology concerning active contribution to evidence-based practice. In the fourth section two empirical examples are presented (1) illustrating that schools are the places where evidence-based practice preventions and interventions should take place and (2) describing various steps of the transfer of basic research to evidence based practice using the case of preventing bullying as an example. The final outlook identifies the contribution the ESDP can make in supporting the transfer of knowledge to evidence-based practice.

1. Challenges for European universities and scientific societies

Since the establishment of the European Union by the Treaty of Maastricht in 1993, Europe has had to face many challenges which have influenced the development of science. These challenges have consequences for universities and their role in Europe. Since the 1960s in Western Europe, and since the 1990s in Eastern Europe, student numbers have grown enormously – sometimes by as much as three or fourfold – transforming the system from one catering to a small segment of society to a mass system. Coping with these changes required cooperation among Europe's universities. In order to bring European universities together and to provide them with a voice, in 2001 the European University Association (EUA) was established as the result of a merger between the Association of European Universities and the Confederation of European Union Rectors' Conferences. The EUA represents and

supports higher education institutions in 46 countries, providing them with a unique forum to cooperate and keep abreast of the latest trends in higher education and research policies (see European University Association [EUA], n.d.).

In 2006 the EUA published the declaration “A vision and strategy for Europe’s universities and the European University Association” which provides insights concerning the new tasks and challenges European universities have to meet (EUA, 2006). According to this declaration, the strength of Europe and its universities lies in the interplay of diverse cultural and multiple linguistic traditions and heritage. Europe’s universities are a major source of creativity, achieved through both cooperation and productive competition. However, challenging times also imply challenges to established structures. As a consequence, Europe’s universities are expected

- to account for their achievements;
- to move from input-oriented bureaucratic systems to outcome-oriented governance;
- to establish new management structures and quality assurance systems;
- to establish knowledge transfer to society at large (“knowledge society”) and industry in particular;
- to increase support to the development of their regions;
- to find a balance between competition and cooperation concerning research profiles, the Bologna structure and graduate qualifications; and
- to identify their general and specific mission.

The EUA declaration pointed out that mission diversity, strategic capability, and accountability can only be developed if universities have the freedom to do so. A system of higher education must therefore be based on autonomous institutions, with the freedom to control and manage their own resources and to compete as well as collaborate. European universities, as strong and autonomous institutions, are fulfilling their raison d’être in teaching, research and the transfer of knowledge by creating a European Higher Education Area (EHEA) and a European Research Area (ERA) and by supporting the implementation of the European Research Council (ERC). In addition, the public role of European universities is specified in a declaration issued by the EUA itself (EUA, 2006). The EUA declared that Europe’s universities and their staffs and students will engage in policy-making to meet the challenges now facing the European Union e.g., to cope with demographic changes, in particular the aging of many populations, internal migration and immigration, to increase the emphasis on lifelong learning, and to ensure that all its citizens play a role in society and the economy. Through research and teaching in all fields of scholarship, universities will not only provide the evidence needed for sound policy formation but will use their expertise to contribute to discussion and debate in national and European policy-making. Given the vision and strategy presented in the declaration, European universities see it as their mission to perform, as an essential part of the knowledge society and economy, the tasks of invention, innovation, teaching, learning, research, knowledge transfer and the fearless criticism of ideas, in the service of Europe and the world (EUA, 2006).

So far universities, as multidisciplinary, locally organized institutions, do not assume responsibility for European or international disciplinary issues. Thus, responsibility is claimed by scientific societies. In the past, scientific societies have assumed many tasks, for example in promoting scientific exchange, supporting young scholars and scientific excellence. However, based on the changing world of sciences and the changing role of universities in Europe, scientific societies are faced with new challenges. Unfortunately, as yet, European scientific societies have not

established an association similar to the EUA. Definitely, it would be a tremendous challenge to bring all European scientific societies under a common roof. However, systematic cooperation and exchange among societies representing related disciplines would be, in a first step, very helpful in refining the challenges and tasks being addressed on the university level and continuing this work on an even more specialized and specific level. Currently, European scientific societies are expected to

- carefully define standards for research, teaching and higher education to guarantee that sound evaluation is possible, not only across disciplines in Europe but also internationally, within a university, and for a discipline across research institutions;
- promote moving from discipline based science to problem based science – that means promoting and supporting inter- and multidisciplinarity;
- cooperate with universities and the European Union;
- promote exchange between science and practice and the transfer of knowledge;
- provide the evidence needed for sound policy formation;
- use their expertise to contribute to discussions and debates in national and European policy-making, and
- to establish systematic cooperation and exchange with related European scientific societies.

2. Current directions in developmental psychology

Developmental psychology is the scientific study of progressive psychological changes that occur in human beings as they age. Originally concerned with infants and children, and later other periods of great change such as adolescence and aging, it now encompasses in principle the entire life span. In his address as incoming president of the European Society for Developmental Psychology (ESDP), Willem Koops (2004) pointed out that developmental psychology mirrors cultural and historical changes in child development. Koops (2004) stressed the disappearance of traditional childhood in the 1970s, when children's access to the mass media began to get out of control (Postman, 1982/1992) and he ended his walk through history with the question: "How can we bring up modern children to adulthood?" (Koops, 2004, p. 16). Classic developmental psychology (in the Rousseau – Piaget tradition), which has been strongly anchored in our culture, is a theory of shortages which indicate what children cannot yet do, in comparison with adults, and is retrospective because it starts from the end point (Breeuwsma, 1993, cited from Koops, 2004). Willem Koops (2004) concluded that "Developmental psychology can detect possible developmental pathways and can be very helpful in the critical evaluation of the results of pedagogical activities, but it cannot decide about the desired direction of upbringing and development" (Koops, 2004, p. 17). Obviously, developmental psychology cannot decide about specific desired directions. Here, Koop's conclusions are definitely appropriate. However, on a global level, developmental psychology can and does claim a positive and applied direction as shown by the applied developmental science orientation proclaimed by Rich Lerner and colleagues (e.g., Fisher & Lerner, 2005; Lerner, Jacobs & Wertlieb, 2005). According to the aims and scope of the Journal of Applied Developmental Science, the applied aspect reflects its direct implications for what individuals, families, practitioners, and policymakers do (see Taylor & Francis, Inc., n.d.).

Representatives of “Positive Development” describe problem solving, emotional regulation, and physical safety as foundational strengths for well-being. These foundational strengths constitute the positive underpinnings of early child health and development, as well as ongoing well-being throughout the life course (see e.g., Bornstein, Davidson, Keyes, & Moore, 2003). The ideas and main concepts of positive psychology (Seligman, Steen, Park & Peterson, 2005) and positive development are influenced and promoted by many researchers e.g., by Paul Baltes’ life-span perspective (Baltes, Lindenberger & Staudinger, 1998; Freund & Baltes, 1998) and Urie Bronfenbrenners’ ecology of human development (Bronfenbrenner, 1979, 2005). In recent years, a main focus has been on positive youth development. This approach is predicated on the understanding that all young people need support, guidance, and opportunities. With this support, they can develop self-assurance in the four areas that are key to creating a happy, healthy, and successful life (National Clearinghouse on Families & Youth [NCFY], n.d.):

- a sense of competence: being able to do something well;
- a sense of usefulness: having something to contribute;
- a sense of belonging: being part of a community;
- a sense of power: having control over one’s future.

Many well-known European developmental psychologists have dedicated their work to positive applied child and youth development, as for example Rainer Silbereisen (see e.g., Silbereisen & Lerner, 2007) who founded and chairs the Center of Applied Developmental Science (CADS) at Jena University, and Cigdem Kagitcibasi who focuses on positive child and youth development across cultures (Kagitcibasi, 2005, 2007a, 2007b). For excellence in research on human development she received the the ESDP's Preyer Award in 2007 (see European Society for Developmental Psychology [ESDP], n.d.-a).

Developmental psychology, in this sense, understands itself neither as a field of study which is "predominantly" driven by basic principles or fundamentals nor as one which is "predominantly" concerned with the implementation of applications. Rather it is a field which equivalently encompasses both components. A similar position is opined by applied developmental science, which fosters a reciprocal relationship between theory and application, wherein empirically based, developmental theory not only guides intervention strategies and social policy, but is influenced by the outcome of these community activities (see Taylor & Francis, Inc., n.d.). This position is anchored in the quadrant model of scientific research developed by Stokes (1997). This model rejects the one dimensional perspective (a fundamental field vs. an implementation field) as being too simple; it postulates two dimensions involving understanding and usefulness, which build a grid upon which disciplines can be categorized. Developmental Psychology, in the sense of the above description, is located in the grey quadrant as use-inspired basic research (see Figure 1).

Insert Figure 1 about here

Considering, on the one hand, the demand on European universities to transfer knowledge from research to practice and, on the other hand, the progressive development within the community surrounding European developmental psychology towards positive applied research, it is our recommendation that European developmental psychology should explicitly and systematically contribute to evidence based practice. Undoubtedly, many developmental psychologists do still provide scientific knowledge for general practice. However, as Robert Slavin pointed out “…

the fact that a program is based on scientific research does not mean that it is in fact effective." (Slavin, 2002, p. 19). The promotion of evidence-based practice requires a systematic procedure moving from fundamental principles to sound evaluated programs and activities.

3. Evidence-based practice and policy

The movement to develop and disseminate evidence-based interventions to practice has gained tremendous momentum in past years with developments in psychology, medicine (e.g., psychiatry), education, and prevention science (Kratochwill & Shernoff, 2003). Also evidence-based reform, the movement toward the use of programs and practices found to be effective in rigorous research, is beginning to find advocates in federal policy (Slavin, 2008a). Definitions of evidence-based practice and evidence-based policy range from rather narrow interpretations whereby the intention is to promote a particular methodology in order to produce a specific form of evidence to broader, all-encompassing views about what it represents (Nutley, Walter & Davies, 2007). A broader definition is given by Davies (2004) who defines evidence-based policy and practice as an approach that "helps people make well-informed decisions about policies, programs and projects by putting the best available evidence from research at the heart of policy development and implementation" (p. 3; cited from Nutley et al., 2007). Under this broad view, "fitness for purpose" acts as the main criterion for determining what counts as good evidence (Nutley et al., 2007). A key requirement for evidence-based policy is the existence of scientifically valid and readily interpretable syntheses of research on practical, replicable programs. This begs an important question: "What kinds of research are necessary to produce findings of sufficient rigor to justify faith in the meaning of their outcomes?" (Slavin, 2002, p. 17).

3.1 Standards of evidence

Various efforts have been undertaken to define the standards of evidence. As one example, the standards provided by the Society for Prevention Research are presented here. The Society for Prevention Research charged a committee to establish standards for identifying effective prevention programs and policies. The Society designed standards to assist practitioners, policy makers, and administrators in determining which interventions are efficacious, which are effective, and which are ready for dissemination (Flay et al., 2005):

An *efficacious intervention* will have been tested in at least two rigorous trials that

(1) involved defined samples from defined populations;
(2) used psychometrically sound measures and data collection procedures;
(3) analyzed their data with rigorous statistical approaches;
(4) showed consistent positive effects (without serious iatrogenic effects);
(5) reported at least one significant long-term follow-up.

An *effective intervention* will have

(1) manuals, appropriate training, and technical support available to allow third parties to adopt and implement the intervention;
(2) been evaluated under real-world conditions in studies that included sound measurement of the level of implementation and engagement of the target audience (in both the intervention and control conditions);

(3) indicated the practical importance of intervention outcome effects;
(4) clearly demonstrated to whom intervention findings can be generalized.

An *intervention recognized as ready for broad dissemination* will also provide
(1) evidence of the ability to "go to scale";
(2) clear cost information;
(3) monitoring and evaluation tools so that adopting agencies can monitor or evaluate how well the intervention works in their settings.

However, as shown by Nutley et al. (2007), the approaches to evidence creation and practitioner use differ significantly among various public service areas. In their analysis Nutley et al. (2007) compare health care (especially clinical services), social care, education (especially school-based education), and criminal justice in the U.K. Moreover, there are important differences in the way in which research is understood, created and synthesized, not only among public service areas, but also within them, especially in the area of education. The special issue "Perspectives on evidence-based research in education" published by the Educational Researcher 2008 focuses on this topic. The different initiatives sponsored by the U.S. Department of Education to synthesize research on educational programs, the What Works Clearinghouse (see http://ies.ed.gov/ncee/wwc/), the Best Evidence Encyclopedia (see www.bestevidence.org), the Comprehensive School Reform Quality Center (see www.csrq.org), the Campbell Collaboration (see www.campbellcollaboration.org), and the U.K.-based Evidence for Policy and Practice Information and Co-ordinating Centre (see www.eppi.ioe.ac.uk), clearly showed that the methods used in these syntheses vary fundamentally, leading to inconsistent conclusions regarding which programs and practices have strong evidence of effectiveness (Slavin, 2008a).

One of the most contentious issues in syntheses of program evaluations is the role of random assignment (see e.g., Cook, Shadish & Wong, in press; Slavin, 2002, 2008a). A review by Hsieh et al. (2005) showed a decrease in the percentage of total articles based on randomized experiments in U.S. educational psychology journals and in the Educational Research Journal over a 21-year period. However, the question is, whether results from random trials differ from those obtained in, otherwise similar, matched studies. While the common regression approach using various predictors of outcomes as covariates has its limitations (see e.g., Heckman, Ichimura & Todd, 1998), statistical matching is assumed to mimic the comparison of individuals in a randomized experiment (Rubin, 1977). Propensity score matching (D'Agostino, 1998, 2005; Rosenbaum & Rubin, 1983) has been shown to provide an unbiased estimate of the average treatment effect (D'Agostino, 2005). In addition, the Euclidean Distance Matching (EuM) procedure proposed by Spiel and colleagues (Spiel et al., 2008) was shown to eliminate baseline differences between treated individuals and controls. Therefore, if random assignment cannot be achieved, the application of these matching procedures is recommended (see also Slavin, 2002).

Additional issues raised in bringing evidence-based research to practice are the lack of careful attention being given to the relevance of construct validity and external validity (Briggs, 2008; Shadish, Cook & Campbell, 2002), the central role of practitioners in the research process (Annan, 2005; Kratochwill & Shernoff, 2003), and how psychologists can best be prepared for evidence-based practice during their graduate training (Kratochwill, 2007).

3.2 Key strategies for successful prevention and developmental programs for children and youth

With the development of the evidence-based practice movement, it becomes apparent that kindergarten and school are the places to foster positive development and to apply evidence-based intervention. As pointed out by Kratochwill (2007), "… schools provide unique opportunities to target children's mental health, their academic performance, and the important relationship between the two; …school practice provides a unique opportunity to follow children, developmentally, across the years (typically kindergarten through 12th grade)." (p. 829). In addition, psychologists working in schools have an extraordinary access to children in families and can focus on prevention and promotion at multiple levels and with multiple targets (Kratochwill, 2007).

In 2003, as a result of the work of the APA Task Force on "Prevention: Promoting Strength, Resilience, and Health in Young People", a special issue, edited by Roger P. Weissberg and Karol L. Kumpfer, was published by the American Psychologist. in their article, Mark Greenberg and colleagues (Greenberg et al., 2003) review a broad range of evidence indicating that school-based prevention and youth developmental interventions are most beneficial when they enhance students´ personal and social assets, while simultaneously improving the quality of the environments in which students are educated (Eccles & Appleton, 2002; Weissberg & Greenberg, 1998). They pointed out that fragmented and short-term activities are not sustainably successful because they are not sufficiently linked to the central missions of schools and are not adequately implemented. Therefore, Greenberg et al. (2003) advocated enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning (SEL). The SEL approach incorporates health promotion, competence enhancement, and youth development frameworks that integrate strategies for reducing risk factors and enhancing protective mechanisms through coordinated programming (Weissberg & Greenberg, 1998). According to Greenberg et al. (2003) there is a solid and growing empirical base to indicate that well-designed, well-implemented school-based prevention and youth development programming can positively influence a diverse array of social, health, and academic outcomes. Key strategies that characterize effectiveness involve the following student-focused, relationship-oriented, and classroom and school-level organizational changes (Greenberg et al., 2003, p. 470):

- teaching children to apply SEL skills and ethical values in daily life through interactive classroom instruction and by providing frequent opportunities for student self-direction, participation, and school or community service;
- fostering respectful, supportive relationships among students, school staff, and parents;
- supporting and rewarding positive social, health, and academic behavior through systematic school-family-community approaches.

3.3 Research use and evidence-based education policy

It is important to note that in the evidence-based policy movement there are considerable differences among countries. While in the U.S., and particularly in the U.K. under Tony Blair, slogans like "what matters is what works" signal an intent to end to ideologically-based decision making in favor of evidence-based thinking (Nutley et al., 2007, p. 10), this is definitely not the case in most European countries. Also, the scientific literature on evidence-based research, practice and policy is, for the most part, generated by Anglo-Americans. One exception is Switzerland which decided in 2002 that "The Federal Parliament shall ensure that the efficacy of measures taken by the Confederation is evaluated." (Art. 170 of the constitution).

As pointed out by Slavin (2008a), throughout the history of education in the U.S., the adoption of instructional programs and practices has been driven more by ideology than by evidence in contrast to fields such as medicine and agriculture (see also Slavin, 2002). In addition, there is a gap between political proclamation and its conversion. On the one hand, in the No Child Left Behind legislation (U.S. Congress, 2001 cited from Slavin, 2002) the phrase “based on scientifically based research” is used 110 times (Slavin, 2002, p. 18). On the other hand, the US Comprehensive School Reform (CSR) funding program, despite a clear focus on proven programs, has so far supplied most of its funds to programs with little or no rigorous evidence of effectiveness. Among 2,665 CRS grants made between 1998 and 2002 (Southwest Educational Research Laboratory, 2002; cited from Slavin, 2002) only 20.8% of grants have gone to programs rated by the American Institutes of Research (AIR) as having strong evidence and 16.0% to programs rated as promising or marginal (Slavin, 2002, p. 16). Slavin concluded that the evidence-based policy movement is by no means certain to succeed. Six years later, Slavin’s submits a more positive appraisal. Evidence-based reform has begun to be advocated in U.S. federal policies (Slavin, 2008a). While Slavin describes the situation in the Anglo-American countries especially in the U.S., the situation in Europe is characterized by two main issues: (1) scientific research in education is far away from an evidence-base and (2) formal structures providing a systematic transfer from research to policy and practice are lacking. However, in education also a framework supporting researchers to apply standards of evidence is needed e.g., financial support and scientific approval for applied research which fulfill standards of evidence (see Kanning et al., 2007).

Slavin (2008b) formulated three essential requirements for evidence-based reform regarding programs and practices found to be effective in rigorous research:

1. There is a need for the development and rigorous evaluation of promising innovations capable of being used on a broad scale;
2. There is a need for federal, state, and local policies to support the use of proven programs and the research and development processes that produce them;
3. There is a need for systematic reviews of research that make research findings readily available to educators and policy makers (Slavin, 2008b, p. 48).

Based on experiences and developments in the U.K., Nutley et al. (2007) discuss in detail how research evidence can be used in policy and practice.

3.4 The challenge for European developmental psychology

While the evidence-based practice movement has gained greatly in impact in recent years in Anglo-American contexts (Kratochwill & Shernoff, 2003) and standards for evidence and transfer to practice have been defined (e.g., Flay et al., 2005), an extensive implementation of these standards has not been achieved in educational research (Hsieh et al., 2005), and evidence-based reform has not yet been established in the federal policies of most European nations. Therefore, the present paper advocates investing efforts to contribute to evidence-based practice. In particular, the paper invites European developmental psychology and its representatives to transfer their scientific knowledge to evidence based practice to promote positive child and youth development in Europe. However, advocating for applied research and its transfer to practice does definitely not mean abandoning basic research. Developmental psychology is considered to be a field of study which

equivalently encompasses principles or fundamentals and the implementation of applications (Stokes, 1997).

It has been pointed out that kindergarten and school are the places to foster positive development and to apply evidence-based intervention (see Kratochwill, 2007). Developmental psychology definitely needs to contribute a large amount of knowledge to evidence-based practice in kindergarten and school. Obviously, for a successful implementation, multidisciplinary work is required (see e.g., Fisher & Lerner, 2005). Increasingly, there is a movement away from discipline based science and towards problem based science. Multidisciplinary research and knowledge transfer in kindergarten and school require not only cooperation among educational scientists, teachers, social workers etc., but also with sub-disciplines of psychology such as educational psychology, social psychology and health psychology as well as evaluation science. Within educational psychology there is a drive to incorporate developmental and ecological perspectives. The emerging discipline Bildung-Psychology[1] (Spiel, Reimann, Wagner & Schober, 2008) provides a systematic structure to anchor research topics and activities with a strong focus on lifelong learning and the process from basic principles and research to evidence-based practice. The expression Bildung-Psychology is derived from the German language term "Bildung" which enjoys a positive connotation, but has no precise equivalent in English. The term, which encompasses the broad area of education and learning, has however implications beyond this field in its meaning. Presumably, the most prominent figure associated with the term Bildung is Wilhelm von Humboldt who advanced Bildung as the basis for a program of education. Bildung-Psychology explicitly calls for the establishment of cooperative efforts with other scientific disciplines.

Section 4: Empirical examples

This section presents two empirical examples. The first example provides support for Kratochwill's (2007) arguments that kindergarten and school are the places to foster positive development and to apply evidence-based intervention. The second example briefly illustrates various steps of the transfer of basic research to evidence-based practice taking into account the standards for evidence, the SEL-approach, and the requirements for evidence-based reform (Slavin, 2008b). As sample cases, inter-ethnic friendship and bullying prevention are chosen. Both topics belong to research areas defined by the ESDP as highly important for European science, policy, and society: Migration – the challenge of adaptation, Bullying – the challenge of prevention.

Example 1: Inter-ethnic friendships

Although the formation of inter-ethnic friendships cannot be taken for granted in contact situations (Schofield, 1995), inter-ethnic friendships do have many positive effects. They are able to reduce ethnic prejudices („ideal contact situation“, Pettigrew,

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1998) and to foster the process of social integration. Social relationships are therefore one key dimension in acculturation models (Berry, 1980).
Friendships are formed on the basis of (perceived) similarity (Berscheid, 1985) and homophily in friendship choices can be found with respect to many characteristics. Ethnic homophily increases with age (e.g., Aboud, Mendelson & Purdy, 2003; Graham, Cohen, Zbikowski, & Secrist, 1998; Hallinan & Teixeira, 1987; Maharaj & Connolly, 1994; Shrum, Cheek & Hunter, 1988;), and some authors (e.g., McPherson, Smith-Lovin & Cook, 2001) identified ethnic homophily in adults as the most important factor leading to manifold forms of ethnic segregation in society. However, most of these studies were conducted in the U.S. and it is questionable whether these findings can be generalized to immigrant groups in European countries. So far only a few European studies have focused on this topic (see e.g., Reinders & Mangold, 2005; Strohmeier & Spiel, 2003; Titzmann, Silbereisen & Schmitt-Rodermund, 2007).

The present study compares friendship patterns among different groups of immigrants and natives (Strohmeier, Nestler, & Spiel, 2006). In particular, the study investigates whether there are differences in friendship patterns inside and outside of school. The study was conducted in Austrian primary schools located in Vienna. In Viennese compulsory schools close to 50% of the pupils speak a mother tongue other than German. In sum, 209 (114 girls, 90 boys) 10 to 11 years old pupils participated. According to their cultural background participants were categorized as native Austrian (n = 77), former Yugoslavian (n = 49), Turkish (n = 46), and multiethnic (n = 37). Participants were asked to write down the name, gender, first language, and classmate status (yes/no) of their friends.

Results showed that friendship patterns at school differ tremendously from friendship patterns outside of school. At school, the friendship patterns of native Austrian children are much more segregated in comparison with all immigrant groups (see Figure 2).

Insert Figure 2 about here

Outside school, children of all groups show a strong homophily-bias in their friendship choices. 86% of Native Austrian, 77% of Turkish, 64% of Yugoslavian and 50% of multicultural group children's friends were from the same ethnic group (see Figure 3). As schools provide opportunities for young people from different cultural backgrounds to meet and to establish inter-ethnic friendships, schools are the places to systematically foster positive inter-cultural relationships. In particular, results show the demand to promote acculturation processes and inter-cultural relationships in natives.

Insert Figure 3 about here

Example 2: Bullying prevention

A huge body of evidence shows that bullying (Olweus, 1993) – a subcategory of aggressive behavior – is widespread in schools all over the world (Craig & Harel, 2004). Longitudinal studies suggest that both bullies and victims are at risk for later mental health problems and involvement in antisocial conduct (Hawker & Boulton, 2000; Olweus, 1993; Roland, 2002). Therefore, effective prevention and intervention programs are needed. So far, the results of school-based bullying preventions have been mixed (Smith, Ananiadou & Cowie, 2003; Smith, Pepler & Rigby, 2004). They

typically produced modest improvements and evaluations did not use rigorous research designs. A positive exception is the Olweus anti-bullying program (Olweus, 2004). Application of a whole school policy approach (Greenberg et al., 2003; Smith et al., 2004) and social and emotional skill training (Schwartz, 2000) turn out to be the necessary requirements for successful prevention. However, to induce a sustainable reduction of bullying, national prevention strategies actively supported by the government are needed e.g., the Norwegian Manifesto against school bullying. In the following, our efforts to prevent bullying in Austria and to transfer evidence-based knowledge to practice are briefly described in three steps.

Results from a WHO study (Craig & Harel, 2004) show high prevalence rates in Austria both in bullying and victimization, and therefore a need for systematic prevention and intervention. However, prevalence rates vary tremendously across classrooms ranging from 54.5% to 0% bullies (mean = 12.3%) and from 41 % to 0% victims (mean 10%) per class (Atria, Strohmeier & Spiel, 2007). Therefore, in the first step of our efforts to prevent bullying, we developed a classroom-based prevention program adaptive to these differences. The Vienna Social Competence (ViSC) training (Atria & Spiel, 2007) is theoretically based on social information theory (Crick & Dodge, 1994) and the results of research on bullying as a group process (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). The two main principles are behavioral enrichment and participation. The ViSC training was applied in four independent trials in Austrian and German schools. To measure its effectiveness, different evaluation models using multiple-method and multiple-informant approaches were applied (see Pellegrini & Bartini, 2000). Results showed that the implementation of the ViSC training was successful and further confirmed the effectiveness of the training principles, short- and midterm reductions of bully and victim behavior and an increase in perceived democracy (Atria & Spiel, 2007; Gollwitzer, 2005; Gollwitzer, Eisenbach, Atria, Strohmeier & Banse, 2006; Spiel, Strohmeier & Atria, 2008). Therewith, the ViSC training fulfills many of the standards for evidence defined by the Society for Prevention Research (Flay et al., 2005). Additionally, the ViSC training targeted a meaningful number of SEL skills (Greenberg et al., 2003; see also Schwartz, 2000).

However, for evidence-based reform and sustainable prevention, political support is needed (Slavin, 2008b). In 2007, initiatives to advocate violence prevention were launched in Austrian federal policies. A mandate was issued by the Austrian Federal Ministry for Education, Culture, and Cultural Affairs to develop a general strategy for violence prevention in Austrian schools and kindergartens. The development of a general strategy was the second step in our efforts in bullying prevention. In its implementation six activity domains were defined (Spiel & Strohmeier, 2007): (1) policy and advocacy, (2) information and public relations, (3) networking and cooperation, (4) knowledge transfer and education, (5) prevention and intervention, (6) evaluation and research. For each domain, specific goals and concrete objectives were prepared. In addition, partners (= stakeholders) responsible for these objectives were assigned.

Within the general strategy, specific attention was given to the application of evidence-based prevention programs. Thus far, the ViSC training has only been defined at the level of school classes and evaluations have not had the benefit of rigorous research designs. Therefore, in the third step, the ViSC training was extended to a school-wide policy approach providing measures at the individual level, the class level and the school level, and thereby encompassing the school principal, teachers, students, and parents (Strohmeier, Atria & Spiel, 2008). In order to provide a sustainable implementation of the ViSC prevention program, a systematic

cooperation with all pedagogical universities in Austria responsible for teacher education was established. In accordance with the standards of evidence, manuals have been prepared for teachers and a rigorous evaluation using randomized trials under real-world conditions is currently being applied. Participating schools are located in all Austrian provinces and, in addition, measures for broad dissemination are under preparation.

5. Outlook – challenges for the European Society for Developmental Psychology

The foundation of the ESDP in 1994 arose from the process of uniting Europe, the idea of bringing European researchers under a common roof in order to promote research topics specific for Europe and to prepare an official framework for the biennial conferences (see ESDP, n.d.-b). The changing world of sciences and the changing role of universities in Europe has resulted in new challenges for scientific societies. These challenges are outlined in the first section of the present paper. To support knowledge transfer and the promotion of evidence-based practice in European developmental psychology, the ESDP can and should contribute by:

- advocating positive child and youth development;
- developing standards which consider conditions and challenges of basic and applied research specific for developmental psychology;
- promoting consensus about what “evidence” is;
- promoting on the one hand standards of evidence in the field of education and on the other hand establishment of formal structures providing the transfer to policy and practice;
- promoting interdisciplinary cooperation and exchange;
- promoting cooperation and exchange with practitioners and policy makers and – if necessary – also with the media;
- developing innovative strategies to communicate findings clearly, quickly, fully, and thoughtfully; and
- defining topics, specific to Europe, of high importance for science, policy, and society.

So far, the ESDP has defined migration as a central topic for Europe and for European developmental psychology. Symposiums and discussions have been organized at ESDP conferences, a special issue focusing on “Immigrant youth in European Countries: The manifold challenge of adaption” was published by the European Journal of Developmental Psychology (Strohmeier & Schmitt-Rodermund, 2008), and a summer school for young scholars on “Immigration and development: Conceptual and methodological considerations” was organized by Frosso Motti-Stefanidi and David L. Sam in 2008 (see ESDP, & Jacobs Foundation, 2008). Concerning bullying prevention, the ESDP actively supports the Kandersteg Declaration against Bullying in Children and Youth (see ESDP, 2007). Further activities including efforts to establish exchange and cooperation with European societies in related fields are in progress.

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Figure 1: Quadrant model of scientific research (Stokes, 1997, p. 73)

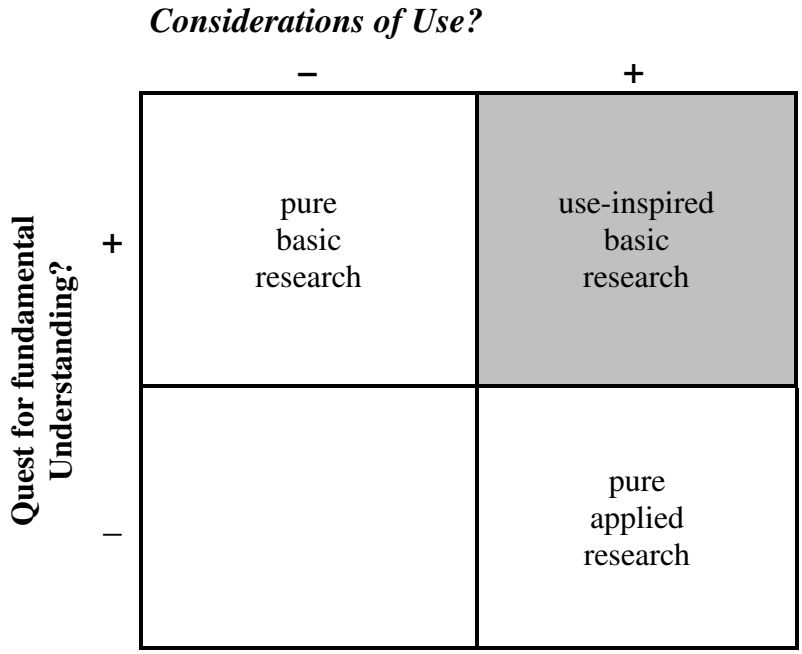

Figure 2: Friendship patterns at school

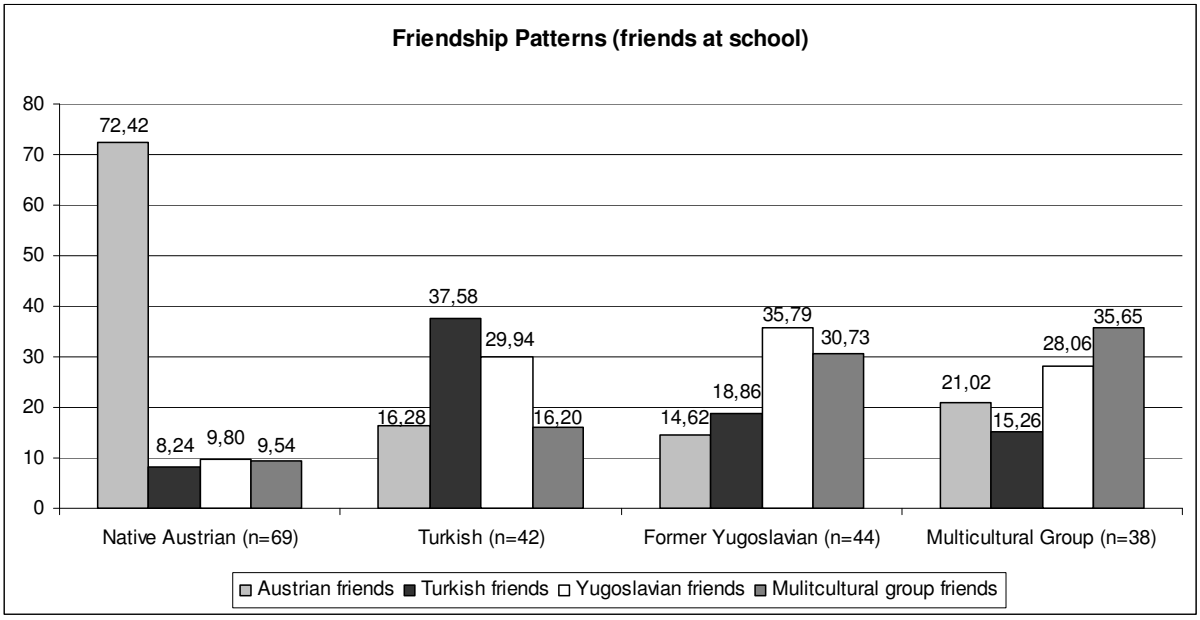

Figure 3: Friendship patterns outside school