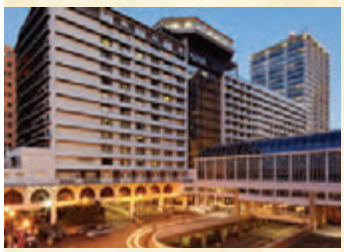
WCGTC

20th Biennial World Conference

Celebrating Giftedness and Creativity








LOUISVILLE, KENTUCKY
AUGUST 10–14, 2013

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21st Biennial World Conference

Educating Gifted and Talented Children
- turning research into practice

10-14 August 2015

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The 20th Biennial World Conference of the WCGTC

Celebrating Giftedness and Creativity

Louisville, Kentucky – USA, August 10-14, 2013

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THE BIENNIAL CONFERENCE COMMITTEE

Taisir Subhi Yamin President, WCGTC
Chair, World Conference 2013

ORGANIZING COMMITTEE

Ken McCluskey
Vice President

Klaus K. Urban
Secretary

Julia Link Roberts
Treasurer

Leonie Kronborg

Leslie S. Graves

Ümit Davaslıgil

Tracy C. Harkins
Executive Administrator
WKU, 1906 College Heights Blvd. #11030
Gary A. Ransdell Hall, Room 2007
Bowling Green, KY 42101-1030, USA
Phone: 1 (270) 745-4123
Fax: 1 (270) 745-4124
Email: tracy.harkins@wku.edu

www.world-gifted.org

FOREWORD

On behalf of the Executive Committee of the World Council for Gifted and Talented Children (WCGTC), I would like to welcome you to the 20th Biennial World Conference of the WCGTC: Celebrating Giftedness and Creativity, Louisville, Kentucky – USA, August 10-14, 2013.

This conference is an arena in which we share our concerns, innovative educational practices, strategies, and theories as we envision new horizons for a different world.

Within the framework of this conference, we have slotted only one paper presentation into each 25 minute time period. This means, however, that with a conference this size – 10 keynote speakers, 20 pre-conference workshops, 330 papers, 15 symposia, and 14 posters – we have more concurrent sessions which makes choice difficult. In an attempt to address this, we have arranged for quite diverse themes and topics in each block. We have also incorporated elements into the overall design of the conference programme which are intended to enhance informal discussions, dialogue, and enjoyment.

We are pleased to welcome you. We strongly believe that your contributions and expertise will enrich and challenge us as we seek, design, develop, and introduce special provisions for the gifted, talented, and creative learners.

No conference happens without the tireless work of many people and we conclude by acknowledging those who were truly on the front lines. We are most grateful to the members of the organizing committee. We are excited about the number, the quality, and the diversity of our conference sessions and activities.

Finally, a note of thanks to all of you for attending the World Conference 2013. As conference attendees participate in various conference strands, we are challenged to reflect upon the meaning of "gifted education" and its impact within educational systems and educational communities, and think about ways they can help support, mentor, and encourage both instructors and learners. I would like to congratulate all the participants for their valuable contribution to the conference. Without the energy and input of the delegates, no conference can succeed.

I believe that the World Conference will inspire all of you by what you will hear and discuss. I also believe that the World Conference will pave the way for further dialogue, interaction, and international collaboration to reinvent educational systems towards more participatory and sustainable development. I hope that we have collectively started the process of removing the walls that often surround education institutions.

This volume, a collection of keynote speeches and papers presented at the World Conference, will serve to continuously remind and inspire us to keep that vision alive.

Taisir Subhi Yamin
President, WCGTC
Chair, World Conference 2013

WKU

THE CENTER FOR GIFTED STUDIES
WHERE GIFTED KIDS FULFILL THEIR POTENTIAL

August 10, 2013

Dear World Conference Participants,

Welcoming you to Louisville, Kentucky, to the 20th Biennial World Conference of the World Council for Gifted and Talented Children is a joy. It is especially nice to have you in the state where the international headquarters of the World Council is located. On January 1, 2011, the headquarters were relocated to Western Kentucky University in Bowling Green, Kentucky.

The Executive Committee of the World Council and the Executive Administrator of our organization plus the staff at The Center for Gifted Studies at Western Kentucky University have worked together on this conference. We have planned with you in mind, hoping that this World Conference will be a highlight of your year.

We know you will take advantage of the many opportunities to learn from each other as you network with international colleagues, listen to keynote speakers, and participate in sessions throughout the conference. Of course, we want you to thoroughly enjoy the social events as well.

If you have questions, please ask the Kentucky volunteers and members of the Executive Committee. Welcome to Kentucky and the 20th Biennial World Conference.

Sincerely,

Julia Link Roberts

Julia Link Roberts
Mahurin Professor of Gifted Studies
and
Treasurer of the Executive Committee

Steven L. Beshear
Governor

Terry Holliday, Ph.D.
Commissioner of Education

EDUCATION AND WORKFORCE DEVELOPMENT CABINET
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August 10, 2013

Dear Participants in the 20th Biennial World Conference:

What a pleasure it is to welcome you to Kentucky! I hope you find the conference to be informative and that you will enjoy time with others who share your interest in gifted education.

In Kentucky we recognize and provide services for children who are gifted and talented in five categories – those who are intellectually gifted as well as those who are gifted in a specific academic area, creativity, leadership, and the visual and performing arts. It is our goal to have the learning ceiling removed for all children and young people so they will make continuous progress and develop their talents.

The Kentucky Department of Education is honored to have the 20th Biennial World Conference of the World Council for Gifted and Talented Children meeting in Louisville. I know you will have a productive and enjoyable time learning from each other.

Sincerely,

Terry Holliday, Ph.D.

WCGTC 2013 INTERNATIONAL AWARDS

In conjunction with the WCGTC biennial conference, the Executive Committee of the World Council presents awards in four different areas of recognition: distinguished service, creativity, research, and leadership. Applications for these awards are submitted to Headquarters, and the Scholarship & Awards Committee assumes the responsibility for selecting the recipients.

The WCGTC Scholarship & Awards Committee has reviewed the nominations and announced the four World Conference Awards that will be officially presented at the 2013 World Conference in Louisville, including:

The World Council Distinguished Service Award
Joyce VanTassel-Baska

The International Creativity Award
Todd Lubart
Peter Csermely

The International Award for Research
Sally M. Reis
Nicholas Colangelo

A. Harry Passow Award for International Leadership in Gifted Education
Taisir Subhi Yamin

PAST WINNERS

The World Council Distinguished Service Award

1999 Wu-Tien Wu
2003 Barbara Clark
2005 Klaus K. Urban
2009 Edna McMillan
2011 Edna McMillan

The International Creativity Award

1999 Morris Stein
2003 E. Paul Torrance
2005 Donald J. Treffinger
2009 Ken McCluskey

A. Harry Passow Award for Leadership in Gifted Education

1997 E. Paul Torrance
1999 John F. Feldhusen
2005 Joseph Renzulli
2007 James J. Gallagher
2011 Dorothy Sisk

WCGTC 2013 SCHOLARSHIPS

In any given conference year, the nominated Scholarship and Awards committee tries to provide some financial assistance to a small number of individuals who may otherwise not be able to attend the world conference. Normally this is done through application. After a review of the applicants, and dependent on their statements of need, and other criteria, a small number may be selected and offered one of a number of scholarships. In this year, the 20th Biennial World Conference, the Scholarship and Awards Committee, in celebration of the International Year of Giftedness and Creativity, has attempted to be flexible and to facilitate a once-off (this year only), larger than normal number of recipients.

For 2013, The WCGTC Scholarship & Awards Committee has granted:

1. Five World Conference registration scholarships to:
   - Karen Bendelman – Uruguay
   - Matthew Edinger – USA and United Kingdom
   - Soha R. Elzalabany – Egypt
   - Bishop Noe Nzeyimana – Burundi
   - Laura Swan – New Zealand

The scholarships will cover each recipient's registration fees for the World Conference, including the pre-conference workshop day and a Gala Dinner ticket.

2. A travel youth scholarship to Luke Moe, a high school student of teacher Terry Friedrichs, USA, who will be presenting with him at the conference.
3. The S&A Committee and the EC also agreed to award a travel, accommodation, and registration scholarship/assistance to: Dr. Prodipta Hore, India, who will be supporting one of his students, also presenting at the conference.
4. The S&A Committee also agreed to provide some additional reduced registration and shared accommodation assistance to the two Edna McMillan Scholarship recipients:
   - Jen Torbeck-Merrill – USA
   - Mary St. George – New Zealand

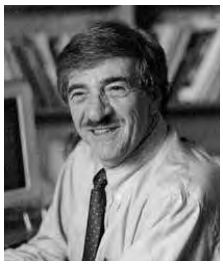
The goal of the scholarships is to make World Conference participation possible for those who would otherwise be unable to attend due to financial constraints. The S&A Committee thanks all those those who applied for a 2013 World Conference Scholarship.

Edna McMillian Scholarships

Dr. Dorothy Ann Sisk, founding member and long time supporter and contributor to the WCGTC, has generously donated two special World Conference scholarships to "passion, profession, and parents who inspire" in the name of her friend and longtime WCGTC colleague Edna McMillan. The $1000 scholarships were given to Jen Torbeck-Merril, the author of the popular online blog "laughingatchaos.com", where she writes about her life as a 2E mom, and Mary St. George, who works as lead educator for GO-Gifted Online, an interactive online One Day School program in New Zealand. The scholarships will help defray their travel costs to the 20th Biennial World Conference in Louisville in August. Both Torbeck-Merril and St. George will present at the World Conference. Dr. Edna McMillan passed away in December 2012 and was an esteemed colleague, supporter, and member of the WCGTC. She served for more than 30 years in various capacities as member, conference organizer, chair, delegate, EC member, and Vice President. The WCGTC is very grateful to Dr. Dorothy Ann Sisk for this opportunity to mark Edna's memory in such a wonderful and fitting way.

KEYNOTE SPEAKERS

Intelligences Outside the Normal Curve: Factors that Contribute to the Creation of Social Capital and Leadership Skills in Young People and Adults



Joseph S. Renzulli
The National Research Center on the Gifted and Talented, USA

People with high potential will generally emerge to leadership and policy-making decisions in all walks of life. What causes some of these people to use their gifts and talents in ways that help to make the world a better place? This session will focus on two sub-theories of a four-part general theory that deals with the development of cognitive and co-cognitive factors that contribute to high levels of creative productivity in young people and adults. The first sub-theory describes how we can promote an orientation toward using one's gifts and talents in positive ways that contribute to the production of social capital. The second sub-deals with how we can promote effective and compassionate leadership in the population of young people with exceptionally high potential. We refer to these two areas of focus as "co-cognitive" characteristics or "intelligences outside the normal curve" because they interact with and give rise to cognitive development, while also playing a role in the formation of beliefs, attitudes, values, and the development of an action orientation for following through on one's beliefs and values. Practical examples of the how the sub-theories can be applied will be portrayed through examples from programs that serve gifted and talented students.

Joseph Renzulli is a Distinguished Professor of Educational Psychology at the University of Connecticut and director of the National Research Center on the Gifted and Talented. His research has focused on strength-based assessment, the identification and development of creativity and giftedness in young people, and models for personalized learning. A focus of his work has been on applying the pedagogy of gifted education to the improvement of learning for all students. His most recent work is a computer-based assessment of student strengths and a teacher-planning tool integrated with an Internet based search engine that matches highly challenging enrichment activities and resources to individual student profiles and teacher selected curricular topics. The American Psychological Association named Dr. Renzulli among the 25 most influential psychologists in the world and in 2009 he received the Harold W. McGraw, Jr. Award for Innovation In Education, considered by many to be "the Nobel" for educators.

A Blueprint for Creative Educational System

Todd Lubart
Université Paris Descartes, France

Creativity is recognized as an increasingly important personal ability and societal resource. An educational system to promote the development of creative potential in students can be designed. It involves three main components. First, creative leaders, such as school system administrators and school principals, who set appropriate goals. Second, creative teachers who provide role models for students, through their behavior in class activities, and openness to new ideas. Third, a climate for learning – its' physical, cognitive, and social features can be configured to promote creativity. Creativity-relevant curricula are treated as part of the climate dimension. The question of whether school administrators, principals, and teachers need to be creative themselves in order to promote creativity in students will be raised. Measures of creative potential for school staff and for students will be presented as part of the tools that can be employed in a complete approach to design creative educational systems.

Todd Lubart is Professor of Psychology at the Université Paris Descartes, and former Member of the Institut Universiatire de France. He received his PhD from Yale University and was an invited professor at the Paris School of Management (ESCP). His research focuses on creativity, its identification and development within the multivariate, investment approach, creative potential and creative giftedness, the creative process and the effect of context on creative work. He is Director of the scientific laboratory "LATI" (Laboratoire Adaptations Travail-Individu); Todd Lubart has been in charge of several research grants on creativity (such as a study of creative giftedness) and has organized international scientific congresses on creativity. He is author or co-author of approximately 100 scientific reports (journal papers, book chapters) on creativity, including *Defying the crowd : Cultivating creativity in a culture of conformity* (NY: Free Press, 1995), *Psychologie de la créativité* (*The psychology of creativity*, Paris: Colin, 2003), *Enfants Exceptionnels*, Rosny: Bréal) (*Exceptional Children*). Finally, Todd Lubart, with Maud Besançon, and Baptiste Barbot is author of *EPoC (Paris:Hogrefe)*, a new measure of creative potential in children.

Changing Paths: Developing Creativity and Creative Minds as a Primary Goal of Gifted Education

Sally M. Reis
Vice Provost for Academic Affairs, University of Connecticut, USA

In this keynote, an argument is made about what should be the most important goal of gifted and talented programs: The development of curiosity, engagement, joyful learning, and creative behaviors in our most talented students and young adults. This goal conflicts with current trends and objectives in both general education and some gifted education programs, and points to the need for educators to embrace creativity, innovation, and the development of these behaviors as a core focus of gifted education services and programs.

Sally M. Reis is a the Vice Provost of Academic Affairs, Board of Trustees Distinguished Professor, former Department Head of the Educational Psychology Department in the Neag School of Education at the University of Connecticut where she also serves as Principal Investigator of the National Research Center on the Gifted and Talented. She was a classroom teacher in public education as well as an administrator before coming to the University of Connecticut. She has authored and co-authored more than 250 articles, books, book chapters, and numerous monographs and technical reports, and worked in a research team that has generated over 35 million dollars in grants in the last 15 years.

Her research interests are related to talent development in all children as well as special populations of gifted and talented students, including: students with learning disabilities, gifted females and diverse groups of talented students who are often underserved. She is also interested in extensions of the Schoolwide Enrichment Model for both gifted and talented students and as a way to expand offerings and provide general enrichment to identify talent and potential in students who have not been previously identified as gifted. Her most recent work has involved methods of using gifted education pedagogy to stimulate interests, learning styles and abilities in all children. She has traveled extensively conducting workshops and providing professional development for school districts on gifted education, enrichment programs, and talent development programs. She is co-author of The Schoolwide Enrichment Model, The Secondary Triad Model, Dilemmas in Talent Development in the Middle Years, and a book published in 1998 about women's talent development entitled Work Left Undone: Choices and Compromises of Talented Females. Sally serves on several editorial boards and is the past President of the National Association for Gifted Children. She has won many professional awards including the Distinguished Service Award for outstanding service by the National Association for Gifted Children and recently, she was named the Distinguished Scholar by the National Association for Gifted Children, for her scholarly contributions to the field and a Board of Trustees Distinguished Professor at the University of Connecticut. Distinguished Scholar and Leader Award, The Center for Education and Study on the Gifted and Talented, University of Northern Colorado, 2007. She won the Neag School of Education Outstanding Research Award in 2006, was given the Educator of the Year Award from Future Problem Solving in 2003. She won the Pi Lambda Theta, Outstanding Educator Award in 2000. She has also won numerous state level education awards, and was named a Teaching Fellow at the University of Connecticut in 1998.

Sally is one of the principal investigators at the National Research Center on the Gifted and Talented and has been the most productive researcher at the Center. Her scholarship is diverse and broad, as summarized by her numerous articles, books, book chapters, monographs, and technical reports. Her specialized research interests are related to diverse populations of gifted and talented students, including students with learning disabilities, gifted females, and culturally and linguistically diverse talented students. She is sthe Distinguished Scholar of the National Association for Gifted Children and a fellow of Division 15 of The American Psychological Association.

Breakthroughs in Assessment of the Gifted

Linda Kreger Silverman
Institute for the Study of Advanced Development, Denver, Colorado, USA

Dramatic changes in test construction have rendered Full Scale IQ scores meaningless for large numbers of gifted students. In August, 2005, the first symposium on assessment of the gifted was held in New Orleans in conjunction with the World Council for Gifted Children. In June, 2006, the National Association for Gifted Children (NAGC) appointed what was to become the first Task Force on IQ Interpretation. In November, 2007, the NAGC Task Force conducted a study of 334 gifted children from 8 sites on

the WISC-IV and discovered that the General Ability Index (GAI) is a better representation of high abilities than Full Scale IQ scores. In January, 2008, NAGC issued a position statement on the selection of gifted students with the WISC-IV, which is particularly useful in identifying twice exceptional, culturally diverse and visual-spatial learners. Based on the same study, in February 2008, Pearson Assessments posted extended norms for the WISC-IV to enable the identification of exceptionally gifted students. In March, 2009, a second symposium on assessment of the gifted brought even more awareness to the testing industry. As a result, the new IQ tests currently being developed will be more appropriate for the gifted and have large validation samples of exceptionally and profoundly gifted children. It is essential for all who rely on intelligence tests to be aware of these new breakthroughs and the research on which they are based.

Linda Kreger Silverman, Ph. D., is a licensed clinical and counseling psychologist. She directs the Institute for the Study of Advanced Development, and its subsidiaries, the Gifted Development Center and Visual-Spatial Resource in Denver, Colorado. In the last 33 years, she has studied 6,000 children who have been assessed at GDC, the largest data bank on this population. This research enabled the creation of extended norms on the WISC-IV and WPPSI-IV. Her Ph. D. is in educational psychology and special education from the University of Southern California. For nine years, she served on the faculty of the University of Denver in counseling psychology and gifted education. She has been studying the psychology and education of the gifted since 1961 and has written over 300 articles, chapters and books, including *Counseling the Gifted and Talented*, *Upside-Down Brilliance: The Visual-Spatial Learner* and *Advanced Development: A Collection of Works on Gifted Adults.* Her latest book, *Giftedness 101*, is due to be released in December, 2012 (New York: Springer).

Who Decides What Giftedness Is? On the Dilemma of Researching and Educating the Gifted Mind in the Light of Cultural Variation, Political Ambition and Scientific Dogma

Roland S. Persson
School of Education & Communication, Jönköping University, Sweden

While problems often arise when scientific fact and educational practice are derived from one cultural setting and then applied unchanged in another is not a recent discovery, it is nevertheless the case that much of current knowledge is not implemented let alone of interest to policy-makers and learned institutions worldwide. The objective of this presentation is to shed some light on why this may be the case. I shall argue that the continued development towards a more consensual understanding of giftedness is currently trapped between scientific dogma; political ambition (or lack thereof); differing cultural understandings of needs, wants and values; and no less important, also individual career ambitions turning science for the good of humanity more into politics "for me." In addition to cultural variation between countries and continents, the scientists and educators of today also have to consider increasing globalisation and its Superculture constituted by a number of political and economic values, which are often little sensitive to local culture. While many of these issues are perchance both sensitive and controversial, depending on culture and context, their consideration is likely to be paramount on the premise that freedom of thought and of expression are essential if we are to understand, in any objective way, what generic human behaviour is, and by extension also how we are to understand and educate gifted and/or talented minds. In concluding this address, a few straight-forward actions focussing on a) mindset and habits, b) research skills and c) self-knowledge and cultural competence are discussed as important in coming to terms with the weakening credibility of international high ability research as well as in understanding how to successfully further develop our knowledge of giftedness and talent in a meaningful way.

Roland S. Persson: Ph. D. in psychology, MFA in Music Education, Diploma in Church Music. Current full Professor of Educational Psychology and Associate professor in General Psychology. Editorial board member of *Education Today;* psychometric consultant to the Swedish Foundation for Applied Psychology (STP); on the International Board of Consultants for The International for Innovation in Education (ICIE); former Editor-in-Chief of *High Ability Studies* (1998–2002) and contributor to many of the standard handbooks and encyclopedic works on Giftedness/ Talent and Gifted Education. Honorary lifetime member of the European Council for High Ability (ECHA); member of the World Council for Gifted and Talented Children (WCGTC) and member of the National Association for Gifted Children (NAGC). International affiliate to the American Psychological Association (APA) and the British Psychological Society (BPS). Member also of the Human Evolution and Behaviour Society (HBES).

What's Exceptional about Twice-Exceptionality?

Megan Foley Nicpon
Belin-Blank Center, University of Iowa, USA

Twice-exceptional students, or gifted students with co-existing disabilities, can be challenging to understand. Typically, some things come very easily, such as solving complex mathematics problems or leading advanced chemistry experiments, yet others are much more challenging, such as getting along with peers or turning in homework on time. During this presentation, Megan Foley Nicpon will share insights from her research and clinical experience with twice-exceptional identification and intervention. Attendees will gain deeper knowledge about the challenges twice-exceptional students face, learn practical strategies about how to optimize talent domains, and discover accommodations that work to facilitate positive educational and personal experiences for this exceptional group of learners.

Megan Foley Nicpon has been affiliated with the Belin-Blank Center at the University of Iowa since completing her Ph.D. in 2003, acting as a project manager, postdoctoral scholar, psychologist, and supervisor of psychological services. She joined the counseling psychology faculty in 2008 and has worked on several major grants, including the federally funded Iowa Twice Exceptional Study. Her research and clinical interests include assessment and intervention with twice-exceptional students, particularly gifted students with autism spectrum disorder, ADHD, and emotional/learning difficulties, and the social and emotional development of talented and diverse students. She has over 30 referred articles and book chapters in the areas of gifted, counseling psychology, and twice-exceptionality, and over 50 presentations at international, national, and state professional meetings. Awards include the Outstanding Research Award in Human Development Division E (Counseling and Human Development) of the American Educational Research Association and, twice, the Mensa Research Award, MENSA Education & Research Foundation.

Number 8 Wire: Enhancing Creativity through Competitions

Tracy Riley
Massey University, New Zealand

Number 8 wire is part of the cultural lexicon of New Zealand, referring to its people's ingenuity and can-do spirit, and using one's creativity to solve problems is the focus and outcome of many competitions across all disciplines. Competitions can, thus, be used to identify, develop, and reward creative breakthroughs by individuals or teams of collaborative innovators. In this keynote, Tracy will explore the ways in which competitions can be used to enhance creativity, featuring voices from New Zealand competitors in local and international events. The potential challenges will also be shared, with a focus on practical ways of overcoming these through competition selection, implementation, and review. What we know about competitions and their use with gifted learners leads to more questions than answers, and in this address Tracy will propose future inquiries into their effectiveness for identifying and enhancing creativity.

Tracy Riley, Ph.D., specializes in gifted and talented education at Massey University in New Zealand. She teaches undergraduate and postgraduate courses in the field in addition to supervising postgraduate research. Tracy is the co-editor of *APEX: The New Zealand Journal of Gifted Education* and is on the editorial board of *Gifted Child Today*. An active advocate for gifted and talented students, Tracy has served on numerous Ministry of Education advisory groups and has co-authored the Ministry handbook, *Gifted and Talented Students: Meeting Their Needs in New Zealand Schools* (2000, 2012). She publishes and presents widely at both national and international levels. In 2007, Tracy was awarded the Vice-Chancellor's Award for Sustained Excellence in Teaching and was the recipient of a national Tertiary Teaching Excellence Award. Tracy is a past member of the executive committee of the Ako Aoteoroa Academy of Tertiary Teaching Excellence and is chairperson of the board for giftEDnz: The Professional Association for Gifted Education.

Self-Regulated Learning: How to Promote Learning Strategies in Gifted Education via Adaptive Teacher Training?

Christian Fischer
International Center for the Study of Giftedness (ICBF), University of Muenster, Germany.

According to the high abilities of gifted children self-regulated learning seems to be most adequate to their learning-style. However, successful self-regulated learning processes require adapted learning strategies like cognitive, meta-cognitive and motivational-volitional strategies. Especially underachievers often lack successful strategies of self-regulated learning and need special instruction on effective learning-strategies. This requires an adequate teaching-style including strategies of information-processing, self-regulation and achievement-motivation, which necessitates an adaptive teacher training to implement those different levels of effective teaching-strategies. This presentation focuses on an enrichment model of self-regulated learning for gifted children, combined with a research project of adaptive teacher training, which has been developed at the International Center for the Study of Giftedness (ICBF). The evaluation of both projects verifies the effectiveness of this combination, especially in the area of learning strategies to promote giftedness across the lifespan.

Christian Fischer, Ph.D., is Full Professor of Educational Sciences for School Pedagogics, Talent Research and Individual Promotion at the University of Münster. He is the Director of the International Center for the Study of Giftedness (ICBF), and Vice-President of the European Council for High Ability (ECHA), Germany.

The Network Concept of Creativity and Talent Support

Peter Csermely
President, The European Council for High Ability (ECHA), Semmelweis University, Hungary

Talents often occupy a central but highly dynamic position in social networks. Inter-community, highly dynamic 'creative nodes' not only determine the systems potential for fast adaptation, but also serve as a 'life insurance' in crisis. Creative transitions are promoted by an increased flexibility (and learning potential) of the complex system. However, an increase in system rigidity increases the system's optimization ability (and memory). Therefore, proper networking strategies are key factors for both talented people and their society to be successful. The efficiency of these processes can be greatly expanded by talent support networks. As an example, the Hungarian talent support network involves a thousand Talent Points, 15 thousand teachers participating in training sessions to discover and help talents, more than 200,000 people involved discovering 26 thousands of new talents in 2 years. Europe has a huge talent reserve. A European Talent Support Network is about to be developed, where European Talent Support Centers act as hubs, European Talent Days are celebrated, and cross-national cooperation is promoted. The European Council of High Ability (celebrating its 25th anniversary in 2013) serves this process with the richness of talent support traditions of all countries in Europe.

Peter Csermely is a professor of the Semmelweis University (Budapest, Hungary) studying networks and talent support (www.linkgroup.hu). In 1995 he established a research network for more than 10,000 gifted high school students. Together with Leon Lederman Nobel Laureate in 2000 he started the Network of Youth Excellence (www.nyex.info) fostering talent support collaboration of 13 countries. From 2006 he chairs the Hungarian National Talent Support Council running a talent support network for ~200,000 people (www.geniuszportal.hu) and starting a European network of talent support (www.talentcentrebudapest.eu). He became the president of the European Council of High Ability in 2012. He wrote and edited 15 books (including 5 talent-related books) and published 220 research papers with a total citation over 6,500. He was the member of the Wise Persons' Council of the Hungarian President, an Ashoka, Fogarty, Howard Hughes and Rockefeller Fellow and received the 2004 Descartes Award of the European Union.

Real Engagement in Active Problem Solving (REAPS): Practical Ideas and Research Results

C. June Maker
University of Arizona, Tucson, AZ, USA

In this speech, I will present both practical examples and research on a model created collaboratively with colleagues from Saudi Arabia, Turkey, Korea, Taiwan, Chile, the UK, Thailand, and the US. This teaching model (REAPS) is an exciting new extension of my work on the development of creative problem solving through Discovering Intellectual Strengths and Capabilities while Observing Varied Ethnic Responses (DISCOVER). As my colleagues and I implemented the DISCOVER curriculum model in a variety of settings, we became aware that, although the model was successful, teachers needed more guidance in how to implement it if we were not there to guide them through the curriculum development process. In 2004, we began experimenting with ways to combine it with other models that offered this guidance; we tested it with varied cultures, in varied settings, and with different ages of students, both gifted and average. After eight years of developing, testing, and evaluating it, we now know it works really well: Children are engaged, their creativity increases, and they learn important academic content. Teachers enjoy using it and can see its benefits. The new model combines DISCOVER with Thinking Actively in a Social Context (TASC), a step-by-step process for solving problems creatively, developed by Belle Wallace in South Africa and used all over the world; and Problem Based Learning (PBL), an approach developed for use in medical schools, adapted for use with children, and also used extensively in the US. In this speech, I will describe the theoretical framework briefly, will give examples of its use at various grade levels, and then give results of research. We have found, for instance, that children's interest in science and problem-solving in general is enhanced, their knowledge base becomes more complex and connected, and their creativity increases. Another important benefit is that they become involved in solving real local, national, and international problems, helping them learn that they can and do have an impact on changing their world.

C. June Maker is Professor of Special Education in the Department of Disability and Psychoeducational Studies at The University of Arizona in Tucson. She coordinates doctoral degree programs in education of the gifted and early childhood education and teaches courses in professional writing. She has worked with teachers and researchers in the US and many different countries, and has published numerous books, articles, and videos. She created and has been validating an assessment and curriculum model for development of talents in children from underserved culturally diverse groups in a project called Discovering Strengths and Capabilities while Observing Varied Ethnic Responses (DISCOVER). Her most recent work is on integrating this model with Thinking Actively in a Social Context (TASC), and Problem Based Learning (PBL) to form, field-test, and conduct research on a new model for developing problem solving, Real Engagement in Active Problem Solving (REAPS). The website for her project, DISCOVER, is www.discover.arizona.edu, and she can be reached at junemaker@hotmail.com

PROGRAM SCHEDULE

FIRST DAY (SATURDAY: AUGUST 10, 2013)

07:00 – 19:00 (7:00 – 7:00) Registration & Information, Suite Tower, Second Floor

08:00 – 16:00 (8:00 – 4:00) SENG Parent Training, Suite Tower, Third Floor – Wilson & Morrow rooms

09:00 – 17:00 (9:00 – 5:00) Vendor Exhibits, Grand/Exhibit Hall

09:00 – 12:00 **PRE-CONFERENCE WORKSHOPS (FIRST SESSION)**, Suite Tower, Second & Third Floor rooms

CODE	TITLE	PRESENTER	ROOM
W1	Gifted Education in the Digital World: Renzulli Learning System	Taisir Subhi Yamin	Beckham
W2	"On a Shoestring" - Providing for Potential through PLN's and Creative Collaboration	Leslie S. Graves	Breathitt
W3	Developing Optimal Learning Environments for Highly Able and High Achieving Students	Leonie Kronborg	Nunn
W4	Lost Prizes: Recognizing and Nurturing the Talent of At-Risk Students	Ken McCluskey	Coe
W5	Talent Development: The Responsibility for All Educators	Julia Link Roberts	Caroll Ford
W6	Creativity: Assessing, Challenging, Nurturing	Klaus K. Urban	McCreary
W7	Spiritual Intelligence: Developing Higher Consciousness	Dorothy A. Sisk	Stopher
W8	Evaluation of Potential Creativity (EPoC)	Maud Besançon	Taylor
W9	Marching to the Beat of a Different Drummer: The Creative Underachiever	Sylvia Rimm	Combs Chandler
W10	Engaging Students in Real Problem Solving: A Hands-on Workshop	C. June Maker	Segell

12:00 – 13:00 (12:00 – 1:00) Lunch, Grand Ballrooms B&C

13:00 – 16:00 (1:00 – 4:00) **PRE-CONFERENCE WORKSHOPS (SECOND SESSION)**, Suite Tower, Second & Third Floor rooms

CODE	TITLE	PRESENTER	ROOM
W11	Gifted Education in the Digital World: Renzulli Learning System	Taisir Subhi Yamin	Beckham
W12	"On a Shoestring" - Providing for Potential through PLN's and Creative Collaboration	Leslie S. Graves	Breathitt
W13	Developing Optimal Learning Environments for Highly Able and High Achieving Students	Leonie Kronborg	Nunn
W14	Lost Prizes: Recognizing and Nurturing the Talent of At-Risk Students	Ken McCluskey	Coe
W15	Talent Development: The Responsibility for All Educators	Julia Link Roberts	Caroll Ford
W16	Creativity: Assessing, Challenging, Nurturing	Klaus K. Urban	McCreary
W17	Spiritual Intelligence: Developing Higher Consciousness	Dorothy A. Sisk	Stopher
W18	Evaluation of Potential Creativity (EPoC)	Maud Besançon	Taylor
W19	Marching to the Beat of a Different Drummer: The Creative Underachiever	Sylvia Rimm	Combs Chandler
W20	Engaging Students in Real Problem Solving: A Hands-on Workshop	C. June Maker	Segell

16:00 – 17:00 (4:00 – 5:00) Break

17:00 – 18:00 (5:00 – 6:00) **WORLD CONFERENCE OPENING CEREMONY**, Grand Ballroom A

18:00 – 19:00 (6:00 – 7:00) **KEYNOTE SPEAKER (1)**, Grand Ballroom A
Joseph S. Renzulli: *Intelligences Outside the Normal Curve*
Chair: Ken McCluskey

19:00 – 20:00 (7:00 – 8:00) **WORLD CONFERENCE WELCOME RECEPTION**
Sponsored by The College of Education and Behavioral Sciences at WKU,
Grand Ballrooms B&C

SECOND DAY (SUNDAY: AUGUST 11, 2013)

07:00 – 16:00 (7:00 – 4:00) Registration & Information, Suite Tower, Second Floor

08:00 – 12:00 SENG Parent Training, Suite Tower, Third Floor – Wilson & Morrow rooms

8:00 – 17:00 (8:00 – 5:00) Vendor Exhibits, Grand/Exhibit Hall

08:00 – 08:50 **BREAKOUT SESSION ONE**, Suite Tower, Second & Third Floor rooms

STOPHER	BREATHITT	NUNN	McCREARY	COE	BECKHAM
Giftedness	Curriculum	Curriculum	Creativity	Assessment	Guidance
(A.1)	(B.1)	(C.1)	(D.1)	(E.1)	(F.1)
(A.2)	(B.2)	(C.2)	(D.2)	(E.2)	(F.2)

WILKINSON	SEGELL	STANLEY	COMBS CHANDLER	TAYLOR	CAROLL FORD
Educational Technology	Future Leaders	Homeschooling	Innovation Education	Moral Education	Social Emotional Needs
(G.1)	(H.1)	(I.1)	(J.1)	(K.1)	(L.1)
(G.2)	(H.2)	(I.1)	(J.2)	(K.2)	(L.2)

09:00 – 10:00 **KEYNOTE SPEAKER (2)**, Grand Ballroom A
Sally M. Reis: *Changing Paths: Developing Creativity and Creative Minds as a Primary Goal of Gifted Education*
Chair: Julia Link Roberts

10:00 – 10:15 Coffee Break, Grand/Exhibit Hall

10:15 – 12:00 **BREAKOUT SESSION TWO**, Suite Tower, Second & Third Floor rooms

STOPHER	BREATHITT	NUNN	McCREARY	BECKHAM	TAYLOR
Giftedness	Giftedness	Curriculum	Creativity	Educational Technology	Future Leaders
(A.3)	(B.3)	(C.3)	(D.3)	(E.3)	(F.3)
(A.4)	(B.4)	(C.4)	(D.4)	(E.4)	(F.4)
(A.5)	(B.5)	(C.5)	(D.5)	(E.5)	(F.5)
(A.6)	(B.6)	(C.6)	(D.6)	(E.6)	(F.6)

STANLEY	COE	SEGELL	CAROLL FORD	COMBS CHANDLER	WILKINSON
Homeschooling	Innovation Education	Social Emotional Needs	Symposium (1)	Symposium (2)	Symposium (3)
(G.3)	(H.3)	(I.3)			
(G.4)	(H.4)	(I.4)			
(G.5)	(H.5)	(I.5)			
(G.6)	(H.6)	(I.6)			

12:00 – 13:00 (12:00 – 1:00) Lunch, Grand Ballrooms B&C

13:00 – 15:00 (1:00 – 3:00) **BREAKOUT SESSION THREE**, Suite Tower, Second & Third Floor rooms

STOPHER	COE	BREATHITT	NUNN	McCREARY	STANLEY
Giftedness	Giftedness	Curriculum	Curriculum	Creativity	Homeschooling
(A.7)	(B.7)	(C.7)	(D.7)	(E.7)	(F.7)
(A.8)	(B.8)	(C.8)	(D.8)	(E.8)	(F.8)
(A.9)	(B.9)	(C.9)	(D.9)	(E.9)	(F.9)
(A.10)	(B.10)	(C.10)	(D.10)	(E.10)	(F.10)

13:00 – 15:00 (1:00 – 3:00)

TAYLOR	SEGELL	BECKHAM	CAROLL FORD	COMBS CHANDLER	WILKINSON
Social Emotional Needs	Twice-Exceptional Learners	Giftedness	Giftedness	Symposium (5)	Symposium (6)
(G.7)	(H.7)	(T.1)	(T.7)		
(G.8)	(H.8)	(T.2)	(T.8)		
(G.9)	(H.9)	(T.3)	(T.9)		
(G.10)	(H.10)	(T.4)			

15:00 – 15:15 (3:00 – 3:15) Coffee Break, Grand/Exhibit Hall

15:15 – 16:15 (3:15 – 4:15) **KEYNOTE SPEAKER (3)**, Grand Ballroom A
Todd Lubart: *A Blueprint for Creative Educational System*
Chair: Klaus K. Urban

16:30 – 17:15 (4:30 – 5:15) **DELEGATES MEETING**, Grand Ballroom A

17:15 – 18:00 (5:15 – 6:00) **GENERAL MEMBER MEETING**, Grand Ballroom A

18:00 – 19:00 (6:00 – 7:00) **HAPPY HOUR RECEPTION**,
Sponsored by CompassLearning, Grand/Exhibit Hall

THIRD DAY (MONDAY: AUGUST 12, 2013)

07:00 – 16:00 (7:00 – 4:00) Registration & Information, Suite Tower, Second Floor

08:00 – 17:00 (8:00 – 5:00) Vendor Exhibits, Grand/Exhibit Hall

08:00 – 08:50 **BREAKOUT SESSION FOUR**, Suite Tower, Second & Third Floor rooms

STOPHER	COE	BREATHITT	NUNN	McCREARY	TAYLOR
Giftedness	Giftedness	Curriculum	Curriculum	Creativity	Assessment
(A.11)	(B.11)	(C.11)	(D.11)	(E.11)	(F.11)
(A.12)	(B.12)	(C.12)	(D.12)	(E.12)	(F.12)

BECKHAM	STANLEY	SEGELL	CAROLL FORD	COMBS CHANDLER	WILKINSON
Guidance	Advocating for the Gifted	Educational Technology	Social Emotional Needs	Twice-Exceptional Learners	Giftedness
(G.11)	(H.11)	(I.11)	(J.3)	(K.3)	(T.5)
(G.12)	(H.12)	(I.12)	(J.4)	(K.4)	(T.6)

09:00 – 10:00 **KEYNOTE SPEAKER (4)**, Grand Ballroom A
Linda Kreger Silverman: *Breakthroughs in Assessment of the Gifted*
Chair: Leslie S. Graves

10:00 – 10:15 Coffee Break, Grand/Exhibit Hall

10:15 – 12:00 **BREAKOUT SESSION FIVE**, Suite Tower, Second & Third Floor rooms

STOPHER	COE	BREATHITT	NUNN	McCREARY	TAYLOR
Giftedness	Giftedness	Curriculum	Curriculum	Creativity	Advocating for the Gifted
(A.13)	(B.13)	(C.13)	(D.13)	(E.13)	(F.13)
(A.14)	(B.14)	(C.14)	(D.14)	(E.14)	(F.14)
(A.15)	(B.15)	(C.15)	(D.15)	(E.15)	(F.15)
(A.16)	(B.16)	(C.16)	(D.16)	(E.16)	(F.16)

BECKHAM	STANLEY	SEGELL	CAROLL FORD	COMBS CHANDLER	WILKINSON
Innovation Education	Moral Education	Partnering Globally	Symposium (7)	Symposium (8)	Symposium (9)
(G.13)	(H.13)	(I.13)			
(G.14)	(H.14)	(I.14)			
(G.15)	(H.15)	(I.15)			
(G.16)	(H.16)	(I.16)			

12:00 – 13:00 Lunch, Grand Ballrooms B&C
(12:00 – 1:00)

13:00 – 15:00 **BREAKOUT SESSION SIX**, Suite Tower, Second & Third Floor rooms
(1:00 – 3:00)

STOPHER	COE	BREATHITT	NUNN	McCREARY	TAYLOR
Giftedness	Giftedness	Curriculum	Curriculum	Creativity	Assessment
(A.17)	(B.17)	(C.17)	(D.17)	(E.17)	(F.17)
(A.18)	(B.18)	(C.18)	(D.18)	(E.18)	(F.18)
(A.19)	(B.19)	(C.19)	(D.19)	(E.19)	(F.19)
(A.20)	(B.20)	(C.20)	(D.20)	(E.20)	(F.20)

BECKHAM	STANLEY	SEGELL	CAROLL FORD	COMBS CHANDLER	WILKINSON
Guidance	Educational Technology	Social Emotional Needs	Symposium (10)	Symposium (11)	Symposium (12)
(G.17)	(H.17)	(I.17)			
(G.18)	(H.18)	(I.18)			
(G.19)	(H.19)	(I.19)			
(G.20)	(H.20)	(I.20)			

15:00 – 15:15 Coffee Break, Grand/Exhibit Hall
(3:00 – 3:15)

15:15 – 16:15 **KEYNOTE SPEAKER (5)**, Grand Ballroom A
(3:15 – 4:15) **Roland S. Persson:** *Who Decides What Giftedness Is?*
Chair: Leonie Kronborg

16:15 – 17:15 **KEYNOTE SPEAKER (6)**, Grand Ballroom A
(4:15 – 5:15) **Megan Foley Nicpon:** *What's Exceptional about Twice-Exceptionality?*
Chair: Ümit Davaslıgil

17:30 – 19:00 **CELEBRATING THE INTERNATIONAL YEAR OF GIFTEDNESS AND CREATIVITY *(IYGC-2013)***
(5:30 – 7:00) **Presentation and Reception**, Grand Ballroom A

FOURTH DAY (TUESDAY: AUGUST 13, 2013)

07:00 – 16:00 (7:00 – 4:00) Registration & Information, Suite Tower, Second Floor

08:00 – 17:00 (8:00 – 5:00) Vendor Exhibits, Grand/Exhibit Hall – **LAST DAY**

08:00 – 08:50 **BREAKOUT SESSION SEVEN**, Suite Tower, Second & Third Floor rooms

STOPHER	COE	BREATHITT	NUNN	McCREARY	TAYLOR
Giftedness	Giftedness	Curriculum	Curriculum	Creativity	Assessment
(A.21)	(B.21)	(C.21)	(D.21)	(E.21)	(F.21)
(A.22)	(B.22)	(C.22)	(D.22)	(E.22)	(F.22)

BECKHAM	STANLEY	SEGELL	WILSON	MORROW	WILKINSON
Assessment	Guidance	Guidance	Advocating for the Gifted	Educational Technology	Partnering Globally
(G.21)	(H.21)	(I.21)	(J.5)	(K.5)	(L.5)
(G.22)	(H.22)	(I.22)	(J.6)	(K.6)	(L.6)

09:00 – 10:00 **KEYNOTE SPEAKER (7)**, Grand Ballroom A
Tracy Riley: *Number 8 Wire: Enhancing Creativity through Competitions*
Chair: Tracy C. Harkins

10:00 – 10:15 Coffee Break, Grand/Exhibit Hall

10:15 – 12:00 **BREAKOUT SESSION EIGHT**, Suite Tower, Second & Third Floor rooms

STOPHER	COE	BREATHITT	NUNN	McCREARY	TAYLOR
Giftedness	Giftedness	Curriculum	Curriculum	Creativity	Assessment
(A.23)	(B.23)	(C.23)	(D.23)	(E.23)	(F.23)
(A.24)	(B.24)	(C.24)	(D.24)	(E.24)	(F.24)
(A.25)	(B.25)	(C.25)	(D.25)	(E.25)	(F.25)
(A.26)	(B.26)	(C.26)	(D.26)	(E.26)	(F.26)

BECKHAM	STANLEY	SEGELL	WILSON	MORROW	WILKINSON
Assessment	Guidance	Advocating for the Gifted	Moral Education	Social Emotional Needs	Twice-Exceptional Learners
(G.23)	(H.23)	(I.23)	(J.7)	(K.7)	(L.7)
(G.24)	(C.37)	(I.24)	(J.8)	(K.8)	(L.8)
(G.25)	(C.38)	(I.25)	(J.9)	(K.9)	(L.9)
(G.26)	(H.26)	(I.26)	(J.10)	(K.10)	(L.10)

12:00 – 13:00 (12:00 – 1:00) Lunch, Grand Ballrooms B&C

13:00 – 15:00 (1:00 – 3:00) **BREAKOUT SESSION NINE**, Suite Tower, Second & Third Floor rooms

STOPHER	COE	BREATHITT	NUNN	McCREARY	TAYLOR
Giftedness	Giftedness	Curriculum	Curriculum	Assessment	Guidance
(A.27)	(B.27)	(C.27)	(D.27)	(F.27)	(G.27)
(A.28)	(B.28)	(C.28)	(D.28)	(F.28)	(G.28)
(A.29)	(B.29)	(C.29)	(D.29)	(F.29)	(G.29)
(A.30)	(B.30)	(C.30)	(D.30)	(F.30)	(G.30)

13:00 – 15:00 (1:00 – 3:00)

BECKHAM	SEGELL	CAROLL FORD	COMBS CHANDLER	WILKINSON
Social Emotional Needs	Twice-Exceptional Learners	Symposium (13)	Symposium (14)	Symposium (15)
(H.27)	(J.11)			
(H.28)	(J.12)			
(H.29)	(J.13)			
(H.30)	(J.14)			

15:00 – 15:15 (3:00 – 3:15) Coffee Break, Grand/Exhibit Hall

15:15 – 16:15 (3:15 – 4:15) **KEYNOTE SPEAKER (8)**, Grand Ballroom A
Christian Fischer: *Self-Regulated Learning: How to Promote Learning Strategies in Gifted Education*
Chair: Humphrey Peter Oborah

16:15 – 17:15 (4:15 – 5:15) **KEYNOTE SPEAKER (9)**, Grand Ballroom A
Peter Csermely: *The Network Concept of Creativity and Talent Support*
Chair: Denise Fleith

17:15 – 18:15 (5:15 – 6:15) **A RECEPTION TO CELEBRATE MILESTONES WITH NAGC AND THE WCGTC**, Rivue Tower, Third Floor, Cochran Addition

National Association for Gifted Children
Shifting into High Gear
60th Annual Convention and Exhibition
Indianapolis > November 7-10, 2013

WCGTC

19:00 – 21:00 (7:00 – 9:00) **GALA DINNER** (Ticketed Event), Rivue Tower, Third Floor, Archibald Ballroom

NOTE*: *Last Day of World Conference in Suite Tower. Wednesday, August 14 World Conference moves to Rivue Tower.

FIFTH DAY (WEDNESDAY: AUGUST 14, 2011)

07:00 – 15:00 (7:00 – 3:00) Registration & Information, Rivue Tower, Third Floor

09:00 – 10:00 **KEYNOTE SPEAKER (10)**, Rivue Tower, Archibald Ballroom
C. June Maker: *Real Engagement in Active Problem Solving (RAPS)*
Chair: Dorothy Sisk

10:00 – 12:30 **BREAKOUT SESSION TEN**, Rivue Tower, Third Floor rooms

WILLOW	DOGWOOD	HOLLY	DAISY	SUNFLOWER
Giftedness	Giftedness	Giftedness	Curriculum	Creativity
(A.31)	(B.31)	(C.31)	(D.31)	(E.31)
(A.32)	(B.32)	(C.32)	(D.32)	(E.32)
(A.33)	(B.33)	(C.33)	(D.33)	(E.33)
(A.34)	(B.34)	(C.34)	(D.34)	(E.34)
(A.35)	(B.35)	(C.35)	(D.35)	(E.35)
(A.36)	(B.36)	(C.36)	(D.36)	(E.36)
(A.37)	(B.37)	(C.37)	(D.37)	(E.37)

12:30 – 13:30 (12:30 – 1:30) Lunch, Fountain, Rose, & Tulip rooms

13:30 – 14:30 (1:30 – 2:30) **CLOSING CEREMONY**, Archibald Ballroom
World Conference 2015; ECHA Conference 2014; ICIE Conference 2014

SESSION DISTRIBUTION

ACCORDING TO THE FIRST NAME OF THE FIRST AUTHOR

Aaron Maurer. *Flattening Your Classroom Walls: Going Global with Coffeechug* **(C.6)**

Aaron Maurer. *Passion Driven Classroom* **(C.11)**

Abdulkadir Bahar; C. June Maker. *Understanding the Cognitive Backgrounds of Mathematical Problem Solving* **(B.5)**

Abdulnasser Alhusaini. *What Is Creativity? Teachers' Beliefs about Creativity in Students' Written Stories* **(E.22)**

Abdulrahman Cluntun. *The School-Wide Enrichment Model in Saudi Arabia and Bahrain* **(E.1)**

Adam Boddison. *The IGGY Experience: The Development and Experiences of Ten Gifted Students in a Global Educational Social Network* **(L.5)**

Adegoke Emmanuel Olukorede. *Factors Affecting the Identification, selection, assessment, and nurturing the Gifted Children in Africa: Implications on Rural Gifted Children in Nigeria* **(F.23)**

Adrienne E. Sauder. *Examining Gifted Adults' Perceptions of Success and Failure Throughout their Education* **(B.6)**

Adrienne E. Sauder. *How Dare I? A Gifted Adult's Autoethnographic Exploration of Experiences of Stigma in Education* **(B.7)**

Adviye Pinar Konyalioglu; Oktay Aydin. *Relationships between Physiological Sensitivity and Intelligence Levels of High School Students* **(F.24)**

Albert Kaput; Chantal Woltring. *Misdiagnosis & Giftedness: Effects, Solutions & Prevention* **(G.7)**

Albert Ziegler; Bettina Harder; Manuela Mahn; Susanne Trottler. *The Development of the Nuremberg Gifted Identification Checklist* **(NGIC) (G.21)**

Alfred Yat-laam Lau. *Adjustment Issues among Gifted Youth in Hong Kong Social-Emotional* **(G.8)**

Alfred Yat-laam Lau. *Positive Life Experiences of Gifted Youth in Hong Kong: A Replication Study* **(K.1)**

Anamaria Vladut; Sabrina Strasser; Wolfgang Pfeiffer; Albert Ziegler. *The Development of High Abilities: The Role of Educational and Learning Capital* **(B.8)**

Ananyashree Birla. *Using Mathematics to Model Microfinance* **(J.1)**

Andrew Almazan-Anaya. *In Search of the Gifted Child Profile, Results of the XXI Century´s Largest Study on Giftedness* **(A.6)**

Andrew Almazan-Anaya. *In Search of the Gifted Children Profile, Results of the XXI Century´s Largest Research on Giftedness* **(A.14)**

Angela Doll Dworin. *The Benefits of Classical Education for Gifted Children* **(C.12)**

Angie L. Miller. *Comparing Creativity Scores for Honors College and General Education College Students* **(D.1)**

Anies Al-Hroub. *Cognitive Characteristics of Mathematically Gifted Children with Learning Disabilities* **(H.7)**

Annette Heinbokel. *Experiences With Grade Skipping – A Long-Term Study Spanning 70 Years* **(J.6)**

Antonine Goumi; Maud Besançon. *Textisms in SMS and Creativity of SMS' Writers* **(D.2)**

Ayşe Cilacı Tombuş; Önder Tombuş; Ümit Davaslıgil; Serap Emir. *Data Mining Test Scores of Bright and Gifted Students* **(A.9)**

Barbara Bannister. *Creative Use of Digital Technologies Provides Opportunities for Rural Gifted Students* **(G.1)**

Bo Zhao. *"Tiantan Orienteering": An Analysis of the Development of Hidden Curriculum in School Sports* **(J.2)**

Brian Lux. *Expanding Their Pond: Benefits of Primary School Exposure to Advanced Content, Vertical Peer Groups, and Research Professionals in STEM (Science, Technology, Engineering and Math) Fields* **(C.23)**

Bruce Kline. *Stress Management for the Digital Age* **(G.2)**

Bui Nguyet Anh. *Uncover the Inborn Talents via Fingerprint Analysis* **(G.22)**

Burak Turkman. *Developing the Academic Motivation, Achievement, and Social Skills of Emotionally Sensitive Gifted Children: Best Practice Recommendations* **(G.9)**

Burak Turkman; Sonya Turkman. *Boosting Creativity Through Art Enrichment* **(D.5)**

Carol Swalley; Kathy Sather. *Crafting Creativity into the Common Core* **(D.6)**

Carolyn Kottmeyer. *Geocaching, the Perfect Gifted Activity: Reduces Stress and Hyperactivity, Calms Anxiety, Sharpens Problem-Solving Skills and Encourages Creativity… and It's the Kind of Fun Gifted Children LOVE!* **(A.10)**

Catherine Zakoian. *Saints, Madmen, Hogwarts and Beyond: Creative Education and Support for the Young Gifted Mystic* **(B.9)**

Charissa Govan; Joyce E. Kyle Miller. *Exploring the Underachievement of Elementary Gifted Students: Analysis of Classroom Achievement and Standardized Test Performance* **(F.25)**

Cheng Li; Wang Yinmei; Liu Zhengkui; Cheng Xia. *Studies of Teaching Intervention on Creativity of Migrant Gifted Children* **(E.7)**

Chen-Yao Kao. *Examining the Differences between Mathematically Gifted Students and Their Regular Peers through the Perspective of Triarchic Theory of Intelligence* **(A.15)**

Jeanne Paynter. *Advocating for Excellence: The Excellence in Gifted and Talented Education (EGATE) School Awards Program* **(J.5)**
Jeb Puryear. *Metacognition and Creativity: A Developmental Perspective* **(E.18)**
Jen Merrill. *Writer and Homeschooling Parent* **(F.9)**
Jennifer Rosenberg. *Differentiated Reading Classrooms at All Grade Levels: Teaching in Small Groups* **(C.18)**
Jennifer Rosenberg. *Maintaining Community in a Differentiated Classroom* **(B.1)**
Jennifer Rosenberg. *What Every Gifted Teacher Needs to Know Before Entering the Classroom* **(B.2)**
Jessica Cannaday. *Faith Based Education and Gifted Education: Where Two Roads Meet* **(H.14)**
Jiangtao Gao. *Probing Effective Ways of Nurturing the Creativity of Gifted Students at an Early Age* **(E.19)**
Jill L. Adelson; Hope E. Wilson. *Perfectionism in the Elementary Classroom: Strategies for Teachers and Parents* **(G.11)**
Jing He. *Self-Regulated Learning in Exam Preparation of Gifted High School Students* **(T.1)**
Jinjian Qiao. *Emphasis on Thinking in Gifted and Talented Children's English Teaching* **(T.5)**
Jiri Mudrak. *Discourses and Experiences of Being Gifted in the Czech Republic* **(A.30)**
Joan Franklin Smutny *Arts Alive! Creative Applications for K-5 Gifted Studies.* **(T.7)**
Joan Franklin Smutny *Supporting Gifted Girls (K-6): Strategies for Addressing Underachievement.* **(T.8)**
Joan Jacobs. *Bibliotherapy as Change Agent: Positive Intervention for Counseling Gifted Students* **(G.12)**
Joan Jacobs; Sue Harvey. *Beyond the Test: Developing Thoughtful Questions to Create Critical Thinkers* **(C.19)**
Joan Jacobs; Sue Harvey. *He's Too Naughty to be Gifted: Using Differential Diagnosis to Increase Identification* **(F.27)**
Josef Trna; Jana Skrabankova. *Excursion to CERN as an Efficient Intrinsic Motivation for Students Gifted in Science* **(C.20)**
Josien Brakke; Greet de Boer; Alexander Minnaert. *Schools with a Gifted Profile in the Netherlands: The Current State of Affairs According to an interview with School Leaders and Teachers* **(A.7)**
Julia Link Roberts; Lynette Baldwin. *Advocating for Gifted and Talented Children* **(I.25)**
Juss Kaur Magon; Bruce M. Shore. *Supporting an Online Community of Gifted and Talented Inquirers: Enablers and Barriers* **(G.13)**
Kao Min-Chi. *A Study of Science Education Experiences of Hard of Hearing Students with Double Exceptionality* **(L.8)**
Karen Bendelman. *e-Mentoring – Bringing Together Gifted Educators* **(I.14)**
Karen Daniels. *The Truth about Parenting Gifted Children* **(F.10)**
Karen J. Micko. *How Gifted Kids Describe their Experiences in American Schools* **(I.19)**
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Kathy Jones. *Digital Advocacy: Communicating with Millennials* **(H.20**
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Kathy Ray. *High Tech PBL: Engaging All Learners Now* **(C.3)**
Kathy Stone. *International Test Results Celebrate Giftedness* **(B.3)**
Katie Larsen McClarty. *Crossing the Finish Line: Effect of Grade Acceleration on College Outcomes* **(B.4)**
Katrina Eddles-Hirsch. *A Phenomenological Study of Advanced Learners Placed in Educational Settings Suited to their Academic Needs* **(D.17)**
Ketty Sarouphim. *Establishing Programs for Gifted Learners in Lebanon Curriculum and Classroom Practices* **(D.18)**
Kevin Besnoy; Dantzler, J.; Siders, J. *I'm an Artist, Why is Technology Relevant to My Life? Artistically Gifted Students and Technology* **(H.5)**
Kevin Besnoy; N. Swoszowski. *How Do I Advocate for My Twice-Exceptional Child?* **(H.8)**
Kim Nettleton. *Gifted Before Kindergarten? Identifying Gifted Children during their Preschool Years* **(F.28)**
Kimberley Chandler. *Developing the Potential of Gifted Students from Underserved Populations: Implications of Curriculum Research for Practice* **(C.4)**
Kimberley Chandler. *Giftedness Across the Lifespan: Differentiated Curriculum as an Essential Intervention* **(A.13)**
Kimberley Chandler; Jennifer H. Robins. *High-Quality Professional Development in Gifted Education: Crucial Components for Training* **(C.16)**
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Kimberly P. Clayton-Code. *Gifted Students' Views and Usage of Technology* **(K.5)**
Kornelia Tischler; Samo Wakounig; Horst Kanzian. *Motivational Orientation Development of High Achieving Students at a Vocational College* **(B.11)**
Kristy Kowalske. *Nurturing Spiritual Intelligence* **(H.23)**
Kuang Ching-Chen. *Drawings by Ji-Sheng Who Has Asperger Syndrome* **(L.9)**
Kuen-shouh Wu; Shu-Fen Wang. *A Study on Pro-Social Behaviors of the Gifted Students in Taiwan* **(I.17)**

Michael Clay Thompson. *Advanced Vocabulary: Direct Study through Latin and Greek Stems* **(C.28)**
Michael Clay Thompson. *Four-Level Literature for Gifted Children: A Differentiated Strategy* **(C.29)**
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Michele Kane; Ellen D. Fiedler. *Changing Family Structures: Helping Gifted Families Find their Way* **(A.37)**
Michelle Bannister-Tyrrell. *The Unschooled Mind: Metacognition and Gifted and Talented Students* **(B.17)**
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Michelle Rogers. *Using Appropriate Norms to Increase Diversity in Gifted and Talented Education Programs* **(B.18)**
Minh Kim. *Current Applications Available on Mobiles/ Tablets for Gifted Education* **(I.11)**
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Mohammad Awad Rawas; Abdulnaser Fakhrou; Mohammed Mohsin Alrashdi. *A Smart Story* **(E.26)**
Mojca Jurisevic. *Gifted Students' Attitudes towards Their Giftedness and Education in the School Context* **(B.20)**
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Patricia Gatto Walden. *The Highs and Lows of Emotional and Spiritual Giftedness* **(K.1)**
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Patti Drapeau. *Articulation and Alignment: Identifying Creatively Gifted Students, Providing Services and Utilizing Assessment Tools* **(E.11)**
Patti Drapeau. *Using Neuroscience to Maximize Imagination, Creativity and Innovation in Gifted Students* **(E.23)**
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Susen Smith. *The Missing Link: Seeking Support for Gifted Underachievers Through Innovative Teaching Practices within Creative Learning Environments* **(K.10)**

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Sylvia Rimm. *Helping Anxious Gifted Children Reverse Underachievement and Build Confidence* **(J.4)**

Taisir Subhi Yamin. *Renzulli Learning System (RLS)* **(E.5)**

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Tan Ee Lyn June. *Using the 5 Senses to Excite and Incite Creative Writing* **(E.36)**

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Terence Paul Friedrichs; Luke Moe. *Traits and Educational Approaches for Gifted ADHD Youth: The Literature – and One Student's Life* **(J.14)**

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Tracy Inman; Brittany Crowley. *The Effects of Problem-Based Learning in Math and Science on High Potential Elementary School Students* **(D.7)**

Tracy Inman; Julia Link Roberts. *DAP Tool: A Protocol for Developing and Assessing Products* **(D.8)**

Tracy Inman; Julia Link Roberts. *The Importance of Culture in Differentiation* **(C.32)**

Usanee Anuruthwong *Assessing Creativity* **(E.35)**

Vella Goebel; Gia Berridge. *Accelerated Reader: Challenging Gifted Children in the "Regular" Classroom* **(D.9)**

Victor Mueller-Oppliger. *Learning Arrangements to Promote "Technologies of the Self", Self-Regulation and Sense of Responsibility in Gifted Education* **(D.10)**

Viire Sepp. *Programme Mobile Labs as a Tool for Curriculum Enrichment* **(G.16)**

Viviene DeOkoro. *The Dilemma of Educating Gifted Students in Jamaica and the Caribbean, and the Triangulation of Successful Strategies Employed to Meet Their Educational Needs* **(C.33)**

Wenda Sheard. *Kinesthetic Grammar for High-Level Thinking Around the World* **(C.1)**

Wenda Sheard. *Making Change: Lessons from Gifted Advocacy in Two Countries* **(F.14)**

Wenda Sheard. *Universal Design Practices: A Marriage of Technology and Differentiation* **(E.4)**

Wendy Behrens. *Identification and Support of At-Risk Highly Able Learners* **(G.25)**

Wieslawa Limont. *Metaphorical Thinking in Education towards Creativity* **(E.34)**

William Gregory Thomas; Susanne Penn Thomas. *How We Teach: A Meta-Analysis of Newspaper, Journal, and Blog Articles on "Gifted" and/or "Twice-Exceptional"* **(G.5)**

Winfred Harris Biddle. *Help Them to Nurture Their Creativity* **(E.33)**

Xingli Zhang; Xiaoyan Li; Mingxin Liu; Jiannong Shi. *Comparison of the Development of Visual Search Abilities Between Children with High and Average Intelligence* **(C.34)**

Yang Yang. *How to Provide the Optimal Education for the Gifted Students?* **(E.32)**

Yasar Barut; Hüseyin Mertol; Hilal Mertol. *Metaphorical Perception of the Gifted and Talented Students with Regard to the Media* **(C.35)**

Yaşar Barut; Murat Gökalp; Hüseyin Mertol; Hilal Mertol. *Metaphorical Perceptions of Gifted and Talented Students with Regard to Geography Lessons* **(C.2)**

Yau Wai; Janet, Au Yeung; Wai Yin; Maria, Chan; Suk Ming; Teresa Cheung. *Infusion of Gifted Education Elements in Everyday English and Chinese Language Classrooms in Hong Kong* **(C.21)**

Yoon Jo Lee; Hang Eun Lee; Kyung Pyu Lee. *The Career Characteristics of Gifted Students in Invention and Entrepreneurship: Focusing on Career Maturity and Career Interest* **(G.19)**

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Abbey Cash *Annemarie Roeper: Reflections on a Global Visionary* **(Symposium.2)**
Abdulkadir Bahar *Creativity and Specific Domains: Research on Verbal, Mathematical, and Scientific Creativity* **(Symposium.13)**
Ann Robinson *Illuminating Lives: Key Figures in Gifted, Talented and Creative Education* **(Symposium.1)**
Anne Beneventi *Annemarie Roeper: Reflections on a Global Visionary* **(Symposium.2)**
Anne Beneventi *Asynchronous Development Revealed* **(Symposium.5)**
Annette Ibsen *Building a Family Support Network* **(Symposium.11)**
Barbara Gilman *Identifying Twice Exceptional (2e) Students in America's Schools* **(Symposium.6)**
Barbara Mitchell Hutton *Annemarie Roeper: Reflections on a Global Visionary* **(Symposium.2)**
Barbara Mitchell Hutton *Asynchronous Development Revealed* **(Symposium.5)**
Bo Andersen *Building a Family Support Network* **(Symposium.11)**
C. June Maker *Creativity and Specific Domains: Research on Verbal, Mathematical, and Scientific Creativity* **(Symposium.13)**
C. June Maker *Talent Development of Young Artists with Asperger's Syndrome* **(Symposium.10)**
Carolyn Kottmeyer *The Edna McMillian Scholarships Celebrating – 'Passion, Profession and Parents that Inspire'* **(Symposium.9)**
Ching-Chen Kuang *Talent Development of Young Artists with Asperger's Syndrome* **(Symposium.10)**
Ching-Chih Kuo *Talent Development of Young Artists with Asperger's Syndrome* **(Symposium.10)**
Christine Neville *Asynchronous Development Revealed* **(Symposium.5)**
Corey Alderdice *State Residential Schools of Mathematics and Science* **(Symposium.15)**
David Williams *State Residential Schools of Mathematics and Science* **(Symposium.15)**
Dorothy A. Sisk *The Study of Spiritual Pathfinders to Inspire Gifted Students to Make a Difference* **(Symposium.14)**
Dorothy Sisk *The Edna McMillian Scholarships celebrating – 'Passion, Profession and Parents that Inspire'* **(Symposium.9)**
Edward Amend *Identifying Twice Exceptional (2e) Students in America's Schools* **(Symposium.6)**
Ellen Fiedler *Annemarie Roeper: Reflections on a Global Visionary* **(Symposium.2)**
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Eunice M. L. Soriano de Alencar *The Study of Spiritual Pathfinders to Inspire Gifted Students to Make a Difference* **(Symposium.14)**
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Hava Vidergor *The Study of Spiritual Pathfinders to Inspire Gifted Students to Make a Difference* **(Symposium.14)**
James T. Webb *Misdiagnosis and Dual Diagnoses of Gifted Children and Adults* **(Symposium.3)**
Janneke Frank *What Works? A Dialogue on Effective Advocacy for the Gifted* **(Symposium.12)**
Janneke Frank *Dabrowski's Theory of Positive Disintegration: A Process of Development* **(Symposium.8)**
Jay Thomas *State Residential Schools of Mathematics and Science* **(Symposium.15)**
Jen Torbeck-Merril *The Edna McMillian Scholarships celebrating – 'Passion, Profession and Parents that Inspire* **(Symposium.9)**
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Lisa Conrad *The Edna McMillian Scholarships celebrating – 'Passion, Profession and Parents that Inspire'* **(Symposium.9)**
Marcia Ruff *Annemarie Roeper: Reflections on a Global Visionary* **(Symposium.2)**
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Mary St. George *The Edna McMillian Scholarships celebrating – 'Passion, Profession and Parents that Inspire'* **(Symposium.9)**
Megan Foley Nicpon *Identifying Twice Exceptional (2e) Students in America's Schools* **(Symposium.6)**
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Michele Kane *Asynchronous Development Revealed* **(Symposium.5)**
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Mike Postma *Identifying Twice Exceptional (2e) Students in America's Schools* **(Symposium.6)**
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Sonia White *The Study of Spiritual Pathfinders to Inspire Gifted Students to Make a Difference* **(Symposium.14)**
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Stephanie Tolan *Asynchronous Development Revealed* **(Symposium.5)**
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Sylvia Rimm *Identifying Twice Exceptional (2e) Students in America's Schools* **(Symposium.6)**
Tim Gott *State Residential Schools of Mathematics and Science* **(Symposium.15)**
Todd Lubart *Illuminating Lives: Key Figures in Gifted, Talented and Creative Education* **(Symposium.1)**
Toni Meath *Teacher and Student Perspectives of Curriculum and Classroom Practices which Engage Highly Able Students: What Does the Evidence Reveal?* **(Symposium.7)**

SESSION DISTRIBUTION ACCORDING TO TOPIC

1 – ADVOCATING FOR THE GIFTED

F.13 Leslie S. Graves. ***Modifying Mainstream Teachers' Perceptions on Acceleration – An Irish Case Study*** **(F.13)** During the Exceptional Ability (Gifted) lectures that are given to post graduate students, both teachers and Ed psychologists on Post Dip and MA in SEN courses at the University College Dublin (UCD), in Ireland, a number of interventions are suggested and explored. One of these is Acceleration. Due to the inclusive educational system in Ireland, wherein differentiation within similar age group classes prevails, there has been a historical resistance and misunderstandings as to the benefits of this methodology for some students. This presentation will outline how the presenter attempts to assist better understanding of this methodology, and in particular will share how one grad student teachers' negative perception of same (Acceleration) became very positive through reflective self-examination and an investigative process that worked.

F.14 Wenda Sheard. ***Making Change: Lessons from Gifted Advocacy in Two Countries*** **(F.14)** Do you want to learn more about the legal, political, and educational aspects of advocacy? Come fill your advocacy toolbox with new and creative advocacy strategies from a lawyer, political scientist, teacher, and former SENG president who currently serves on the board of Potential Plus UK (formerly known as the United Kingdom's National Association for Gifted Children). Hear what the presenter has learned in the United States and the United Kingdom about gifted advocacy. Learn what political scientists have discovered about how to increase the membership roles of advocacy organizations. Learn why and under what conditions people join advocacy groups and become active in organizations. Hear strategies used by SENG and Potential Plus UK to build advocacy capacity, including strategies relating to fundraising, membership tiering, liaison programs, helpline systems, peer-review processes, key indicator tracking, social networking, professional development provision, and service packaging. The presentation will include opportunities for those involved in advocacy efforts to share ideas.

H.11 Edward Wayne Lord; Julie Dingle Swanson. ***Harnessing and Guiding the Power of Policy – Examples from One State's Experiences*** **(H.11)** Educators often view themselves as victims of educational policy. Rarely do they consider how to harness educational policy to control and use it effectively. Gallagher (2002) identified four drivers of educational policy change: court cases, legislation, administrative rules, and professional standards. Using his framework, this session will address the conceptual aspects of gifted education policy linking these drivers of policy change to research and practice. Examples from two gifted education policy studies in South Carolina will be used to illustrate the power of gifted educational policy and the avenues for active participation at various levels for harnessing the power of policy. Shared leadership, monitoring current policies, keeping abreast of developments in the field, and using data to determine impact of gifted programs will be discussed as fundamental actions for shaping effective gifted educational policy. Participants will apply guiding questions applicable in a variety of educational settings to assess their gifted education policy and identify strategies for continuous policy improvement.

H.12 Debra Anne Mishak. ***Being "Smart" About Gifted: How to Lead Without Sacrificing Your Integrity, Getting Fired, or Losing Your Mind*** **(H.12)** Whether new to the field of gifted education administration or a seasoned gifted professional, gifted program administrators throughout the world face perennial obstacles: increasing public awareness and understanding of the gifted, talented and creative in society; creating and maintaining a defensible, data-driven program; and insuring its long term growth and sustainability. Borrowing from systems theory, change theory and business leadership, this presentation shows how our knowledge and skills can play an essential role in supporting local general education efforts, while at the same time creatively challenging anti-intellectualism and reinvigorating gifted advocacy worldwide.

I.23 Christine Nobbe. ***Using Social Media for Education, Networking, and Advocacy*** **(I.23)** Twitter, Facebook, Google+, Skype, Four Square, Instagram, Tumblr, LinkedIn, Flikr . . . Social media allows millions of people to connect across the globe, and beyond! Astronaut Chris Hadfield has 9,964,000 Twitter followers! His Tweets from the International Space Station were eagerly read and responded to, exciting people who already followed the space program and inspiring many new followers. Imagine connecting with thousands of gifted educators around the world to discuss the social-emotional needs of gifted learners or to share curriculum ideas. Think about ways your students could connect with

scientists in the field, mathematicians writing proofs, or engineers solving problems, as if they were in the same room! Consider educating teachers and parents about the needs of highly creative individuals through social media. In this session, we will explore several social media options, their strengths and weaknesses, and specific ideas on how to use social media to educate, network, and advocate for gifted and creative individuals. Please bring your smartphone, tablet, or laptop (if you have one) to explore along with the presenter. This session will help beginners get started and assist experienced users in taking better advantage of social media.

I.24 Frances Karnes. ***Gifted Education and Legal Issues: An Update*** **(I.24)** There is an expanding body of knowledge on legal issues in gifted education. As teachers, administrators, parents, psychologists, and concerned citizens we must be monitors of potential legal problems in gifted education. Topics will include negotiation, mediation, due process, and the courts. The following will be among the problems and issues addressed: early admission of gifted students to kindergarten, screening, and identification, appropriate instructional programming, teacher certification, tort liability, awarding of Carnegie units for graduation, misrepresentation and fraud, dual enrollment, and home schooling. Attention will be directed to the role of the Office for Civil Rights in matters pertaining to the gifted and their education. Conference participants will be encouraged to ask questions and raise problems and issues. Audiences of this presentation will be more informed and better equipped to address the complex legal issues facing gifted students, teachers, school administrators, and parents of gifted students in today's society.

I.25 Julia Link Roberts; Lynette Baldwin. ***Advocating for Gifted and Talented Children*** **(I.25)** Educators and parents of gifted children are often surprised when they must take on the role of advocate for the gifted children in their care. Educators assume that colleagues and parents are as eager as they are to see that gifted children are appropriately identified and challenged. Parents assume that educators know how to meet the needs of gifted children and are eager to do so. Parents also assume that other parents will be understanding and supportive. It's wonderful when the support is there; it can be disheartening when it's missing. That's when the role of advocate must be activated. This session will look at what one must do to become an effective advocate so that appropriate educational opportunities for children who are gifted and talented are in place.

J.5 Jeanne Paynter. ***Advocating for Excellence: The Excellence in Gifted and Talented Education (EGATE) School Awards Program*** **(J.5)** How can we advocate for excellence in gifted education programming in a district, province, or nation without mandated program standards or designated funding? This session will share a successful strategy that is replicable in other school districts. In 2010, The Maryland State Department of Education and the State Advisory Council on Gifted and Talented Education initiated the *Excellence in Gifted and Talented Education (EGATE) School Awards Program.* This recognition program honors elementary, middle, and high schools that provide gifted and talented programs aligned with the Maryland *Criteria for Excellence: Gifted and Talented Program Guidelines*. Each EGATE school submits a comprehensive application to documenting twenty-one different objectives under four program goals: Student Identification, Curriculum, Professional Learning, Program Management and Evaluation. The application process equates to a year-long gifted program self-study which identifies program strengths and weaknesses. School teams recognize the need to remediate weak areas before they can submit their EGATE applications. The EGATE schools are recognized with Governor's proclamations at a reception where they proudly display their EGATE school banners. They post the EGATE designation on their websites and host celebratory visits from the Advisory Council. In the first three years, 21 schools have earned the EGATE status. Why do schools pursue the EGATE status? School teams report that the process leads to shared ownership for gifted education among staff, an ongoing momentum for program improvement, and a great sense of affirmation and pride. EGATE demonstrates that intrinsic rewards can and do motivate excellence.

J.6 Annette Heinbokel. ***Experiences With Grade Skipping – A Long-Term Study Spanning 70 Years*** **(J.6)** Grade skipping can have a profound effect on the lives of those exposed to the experience. Therefore a questionnaire was developed for adults who had skipped a grade. They were to be 25 or older so that they would judge the experience with hindsight. In 2012, 115 adults answered a questionnaire. They were born between 1917 and 1987, so the research spans 70 years. However, the bulk of the skipping took place between 1980 and 2003. This research is partly based on a previous one. In the early 1990s, faculty and parents in one of the German states were questioned about their experiences with grade skipping. Interviews were also conducted with some of the youngsters from the parents' sample. Almost a quarter of the new answers stem from that sample. It is important to ask questions while the students are still at school to remove unnecessary obstacles. However, every pupil that leaves or joins a class, every new teacher can change the atmosphere

so that it becomes more positive or negative for individual students. Therefore, it is just as important to ask adults what they think about grade skipping in retrospect. A balanced judgment is only possible after leaving school. To put it in a nutshell: 89% of the females and 80% of the males were happy with the experience and would do it again. An important questions remains: why were between 10 and 20 per cent unhappy and what can be done to avoid that?

2 – ASSESSMENT, SCREENING, AND IDENTIFICATION: APPROACHES, MODELS, AND TOOLS

E.1 Abdulrahman Cluntun. ***The School-Wide Enrichment Model in Saudi Arabia and Bahrain*** **(E.1)** This research report covers a quarter century of hard work in implementing the School-Wide Enrichment Model (SEM) in the Kingdom of Saudi Arabia and the Kingdom of Bahrain. Many studies have provided results of implementing SEM for different school levels (from grade 1 to grade 12), different student genders, teacher genders, as well as school types (male students with male teachers, male students with female teachers, and female students with female teachers), and different locations (Saudi Arabia and Bahrain). As a result new adaptations came up in modifying both identifying (such as modifying SRBCSS) and enriching the students interests (such as SEM) that are suitable to the area. Saudi Arabia and Bahrain are among many countries that are paying serious services and attention to SEM. Many projects and programs were invited and encouraged to serve the gifted; however, the local community is in favor of serving the gifted during the school daytime. The School-Wide enrichment model is among these programs that have been implemented in Bahrain since 1989. Learning outcomes include: (1) A new adaptation of SRBCSS; (2) A new strategy to identify the gifted all-year round; and (3) A new school-Wide enrichment model for the Gulf area.

F.11 Debra Smith; Jill Minor. ***The Masking Behaviors of the Gifted*** **(F.11)** Research has shown that students referred for gifted testing often exhibit the qualities of the high achieving, academically and socially gifted. However, these characteristics cover only a small portion of the gifted population. In our schools, the front lines of identification are our classroom teachers, counselors, and administrators. It is most important for them to understand some of the more unique qualities beyond the easily recognizable "academic" gifted ones. The ability to identify attributes that mask a student's giftedness helps in identification, determining the needs in the classroom, and developing individualized plans for student's specific needs and instruction. In this session, the focus will be on specific affective issues beyond the academic that gifted children face that can be used as identifiers of giftedness. These include Dabrowski's theories of intensities, misdiagnosis/dual diagnosis, asynchronous development, perfectionism, disorganization, and self-concept. Concrete examples will be explored, making a direct connection between the teacher/counselor/administrator and the students they have had in their own school. Identifying the atypical gifted student in the classroom and some specific ways to help those students will result in a more positive classroom environment for everyone. Administrators are encouraged to attend in order to understand the frustrations these students face and how their behaviors may be exhibited even sitting in their office awaiting disciplinary action. Teachers will find a new lens through which to see some of their "quirky" students, and Gifted Specialists will be given tools to help their staff to work with the unconventional gifted population.

F.12 Edward R. Amend. ***Misdiagnosis and Missed Diagnosis of Gifted Individuals*** **(F.12)** This session offers an overview of common misdiagnoses of gifted individuals and those diagnoses that are often missed in gifted individuals. Misdiagnosis most frequently occurs when professionals mistakenly view specific social and emotional characteristics of gifted individuals as signs of pathology, leading to inappropriate treatments or classroom accommodations. On the other hand, missed diagnosis—an equally problematic situation—has been downplayed. Missed diagnosis occurs when factors of giftedness obscure weaknesses, or problematic behaviors are minimized because one is gifted. Twice-exceptional children are not identified as such because, for example, their strengths cover up weaknesses or school-related concerns are misattributed to giftedness rather than the handicapping condition such as a learning disability or attention disorder. In both cases, individuals fail to receive the necessary interventions to address their unique needs. With a focus on the behavior patterns that lead to misdiagnosis and missed diagnosis and on the relation between giftedness and clinical syndromes such as Attention-Deficit/ Hyperactivity Disorder and Asperger's Disorder, the presenter will outline concerns and ways to minimize the likelihood of these two equally problematic situations.

F.17 Mariska Poelman. ***Start Group-Screening at High School Entry*** **(F.17)** The Radboud University Centre for the Study of Giftedness (CBO) in Nijmegen (NL) has 15 years of experience in providing over 75 high schools all over the

Netherlands with early group-screening support and services. In this talk, Drs. Mariska Poelman explains the benefits, the approach, and the results of these activities, and encourages the audience to follow the example set by the CBO because of the positive feedback by students, parents, and schools. Three main reasons to perform group-screening at high school entry are: to provide gifted children with a good start in secondary school in order to release their potential, to prevent drop-out, to develop the talent in our young population for the benefit of society. With the right support for gifted students in high school, approaching them at the right level of development, it is possible to release their full potential. The right support may consist of enrichment classes, fast-track education programs, broadened education program, contact with peers, and other activities schools can develop and provide. By performing group-screening of all students entering high school, and discussing the results with the teachers and mentors, the students' potential and strong and weak areas (intellect, motivation and creativity) can be made clear. The CBO offers a 'hard' test in the screening, to make differentiation between students in the highest levels of secondary education possible. Comparing the test results with the average in the tested group of peers rather than with the norm (national) average, the CBO offers better insight into the students' capacities than similar services.

F.18 Mariska Poelman. ***Results of Group-Screening in High School Entry*** **(F.18)** The Radboud University Centre for the Study of Giftedness (CBO) in Nijmegen, the Netherlands, has 15 years of experience in providing 75 schools in the country with early group-screening support and services. We would like to expand our experience internationally, so who would like to join this screening service and related research? In this talk Drs. Mariska Poelman explains the benefits, the approach, and the results of these activities, and encourages the audience to follow the example set by the CBO because of the positive feedback by students, parents and schools. Three main reasons to perform group-screening at high school entry are: to provide gifted children with a good start in secondary school to release their full potential, to prevent drop-out, and to develop the talent in our young population for the benefit of society. After finding the definite form of the test, we compared the test results of students in different classes and of different ages. We also looked at the re-test results of pre-university classes (first and third grade). Research questions that are currently being investigated are: Which combination of tests has the best predictive value? What about the results of first and second language learners? Is there a difference in scores of boys and girls? What about the scores of younger, accelerated students? And what about motivation? These and additional questions of interest will be discussed in this session.

F.19 Marzieh Amini; Bita Sayar. ***The Study of Relationship between Perfectionism, Meta Cognition and Learning Styles in Gifted Medical School Students*** **(F.19)** The aim of the present study was to investigate the relationship between perfectionism, meta cognition, and learning styles in Gifted Students of Shiraz Medical School. The sample consisted of one hundred and sixty five students selected through a random sampling method. The questionnaires used in this investigation and administered to the group were: Kolb's Learning Styles Inventory (LSI), positive and negative perfectionism scale and meta cognitions questionnaire (MAI). The results of the study showed significant positive relationships between positive perfectionism and concrete experience and positive perfectionism and active experimentation, but there were no relationships between positive perfectionism and other learning styles. There was also a significant negative relationship between negative perfectionism and concrete experience and active experimentation, but there was no relationship between other learning styles and negative perfectionism. The results further revealed that meta cognition and all its components have a significant relationship with all learning styles. Positive perfectionism also showed a significant relationship with meta cognition and all of its components, but no significant relationship was found between negative perfectionism and meta cognition. Boys had higher negative perfectionism scores than girls, but there was no difference between boys and girls on positive perfectionism. The mean score of cognitive regulation in girls was higher than boys and there was no difference between components of knowledge of cognition and meta cognition variables. There were no significant differences between both sexes in terms of learning styles.

F.20 Poul Nissen. ***The Danish Giftedness Checklist*** **(F.20)** In many schools there are gifted students who need a challenge, but are unidentified by their teachers. Thus early identification and intervention is necessary for optimal development. However, many intelligence tests are time-consuming and costly. In this presentation, a brief and easy-to-use screening instrument will be presented. This checklist is a self-report, single page, paper-and-pencil questionnaire comprising of 25 items, which can be completed quickly by the student. Each item is unipolar and asks the respondent about the match between a listed character trait and the student's self-perception on a 3-point scale: 0 (not true), 1 (somewhat or sometimes true), and 2 (very true or often true). A comparative validity study was conducted on a group of 91 students with an IQ score between 130 and 160 (M=142) a group of 42 'ordinary' students with an IQ between 84 and 116 (M=103). In advancing the practical application of the giftedness checklist, a set of cut-off intervals for identification of

gifted students was determined using the total score on the gifted checklist. Using the intervals enables the teacher to determine the probability of giftedness based on raw scores.

F.21 Raquel Bronsoler. ***Discovering and Developing Talents in Diverse Gifted Students through Science Hands-on Learning*** **(F.21)** The Universidad de los Niños is an afterschool program specially tailored to teach children with special abilities. It was created more than 27 years ago to contribute to the understanding of the behavioral characteristics of gifted children while nurturing their talents. A diversity of strategies is used to develop the students' academic, communication, planning, forecasting, creative, and evaluation talents, as well as their self-esteem. We establish a climate that values and enhances intellectual ability, talent, creativity, and decision-making. We stimulate capable students into developing and using their abilities for self-appraisal and recognition of personal talents. Students acquire a sense of social responsibility in developing and using their special abilities. Students are identified by focusing on their special strengths. Twice exceptional students, in some cases, find opportunities to develop their talents. Many times giftedness will go unnoticed and unaccommodated in favor of attending to their learning deficits. We focus on talents and give these students the opportunity to participate in the workshops and develop their areas of strength. They are also encouraged to seek outside help to work on their disabilities. Parental involvement is also a priority. This supportive environment guides students to grow as individuals. Many have reached success in the academic, social, and emotional areas. They also gain confidence and recognition of personal talents and develop awareness of the importance of pursuing their educational goals. Many have turned into successful professionals and respected individuals with strong taproots our school provides.

F.22 Stanislav Dovhyi; Oleksandr Burov. ***Research Giftedness: From Hidden Abilities to Successful Scientist*** **(F.22)** Critical and general fields of human activity need experts with high research abilities more and more. Scientific training is currently conducted not only at the university, but also at the school level. Modern society needs to find, identify, train, and support gifted children and talented youth as early as possible to get highly qualified experts for science and technology area in future. To describe Ukraine's national system for engaging schoolchildren in scientific activity. The process of going from (inter-)school lab to university to postgraduate studies/experimental site to business was created at the national, regional and local levels, and includes organizational, informational and educational tools to ensure its elements function. Particular tools are Minor Academy of Sciences of Ukraine and virtual schools of young inventors and young scientists on the base of Institute of Gifted Child. There are 10 thousand groups, clusters, and sections in different areas operating in the system of Minor Academy of Sciences of Ukraine, in which over 250,000 secondary pupils are involved (where 33.1% are pupils from schools in rural areas). Most of them demonstrate achievements in particular areas, but many students left out of scientific competition can have hidden abilities for research. Tools to reveal such hidden abilities are discussed based on the results of observation of more than 3500 schoolchildren from 8th to 11th grade in 22 schools in Kiev, Dnepropetrovsk and Ivano-Frankovsk.

F.23 Adegoke Emmanuel Olukorede. ***Factors Affecting the Identification, selection, assessment, and nurturing the Gifted Children in Africa: Implications on Rural Gifted Children in Nigeria*** **(F.23)** African gifted and talented children are heterogeneously distributed by birth across the world, irrespective of socio-economic, cultural, ethnic groups, languages, race or color in all continents in which Africa is one. The problems in Africa are enormous. African children have suffered a lot of set-backs ranging from poverty, bad leadership, greediness, bad educational policies, and other cultural challenges, unlike other continents of the world that have used science and technological advancements to enhance and propel the potentials of their gifted children. The enormity of these problems are stifling the potentials of the un-discovered children who are to be gifted children in the rural communities. The paper identified a number of factors working against identifying, selecting, and nurturing the gifted and talented children by sampling 60 teachers in 2 federal government schools in Abuja, the Federal capital of Nigeria. The results showed that African children could reach their potentials if those identified barriers can be removed.

F.24 Adviye Pinar Konyalioglu; Oktay Aydin. ***Relationships between Physiological Sensitivity and Intelligence Levels of High School Students*** **(F.24)** The purpose of the study is to identify the relation between intelligence levels and physiological sensitivity of high school students in the academic year, 2012-2013. Physiological sensitivity implies sensibility in terms of seeing, hearing, tasting, touching, and smelling. Physiological sensitivity is a congenital trait and a basic determinant for personality development (Greenspan and Salmon, 1998). Accordingly that physiological sensitivity has an effect on various developmental fields of a child can be accepted as natural. Knowing and displaying the relationship between intelligence and physiological sensitivity is interesting and important and may have

meaningful results for both developmental psychology and education science. It is also possible to compare gifted and non-gifted students in this research. The subheadings of the research are differentiation of this relation depending on gender, preschool education and age variables. This research was conducted in three high schools in Maltepe county in Istanbul. "Raven's Advanced Progressive Matrices" and "Physiological Sensitivity Scale" were applied to 1st-4th grade students. Pearson moment correlation coefficient and independent sample test analysis were used on the obtained data. Statistical analysis of the whole study is in progress.

F.25 Charissa Govan; Joyce E. Kyle Miller. ***Exploring the Underachievement of Elementary Gifted Students: Analysis of Classroom Achievement and Standardized Test Performance*** **(F.25)** Underachieving gifted students, described by Gowan (1955) as "one of the greatest social wastes in our culture," are a challenge to educational stakeholders and a loss to society. Gifted children, who are often identified at an early age, possess unique talents and abilities that set them apart from their peers. They are highly inquisitive, learn to read early, have extensive vocabularies, and think abstractly. When placed in an academically stimulating and nurturing environment, their abilities can be monitored and developed. However, when gifted students underachieve, their potential to contribute their unique insights and perspectives is diminished. Unfortunately, there is a common misconception in educational settings today that the intellectually gifted will self-sustain academically. The purposes of this study were to determine if underachievement exists at the elementary school level, and to discover the causes of the onset of and patterns in underachievement in elementary gifted students. Drawing on archival data that included report card grades and the Texas Assessment of Knowledge and Skills (TAKS) reading and mathematics performance over a five year period and attendance records, students who were identified in their 1st grade year as Gifted and Talented (GT) were analyzed to discover the timing and patterns of the onset of underachievement. This evidence revealed that students did experience semesters of academic underachievement in their elementary school years, some as early as second grade. Statistical significance was found in the duration of underachievement and in the TAKS Reading and Mathematics scale scores between gifted achievers and gifted underachievers. No statistical significance was found in the attendance patterns of gifted students. The results of this research suggest that underachievement begins at the elementary level. It is important therefore that educators monitor the achievement of students across the core subjects and consistently review students' performance on standardized assessments in order to better prevent underachievement. Participants in this session will be involved in sharing their knowledge of the many ways in which this phenomenon can be manifested as well as solutions to this problem.

F.26 Gillian I. S. Eriksson, Jeanette Lukens. ***Advocating for Marginalized Gifted Students: The Essential Role of Professional Development of Teachers*** **(F.26)** This presentation will examine the experience and impact of marginalization on gifted students from underserved diverse populations. Using a model for Developing Intercultural Excellence (DICE, Eriksson, 2007), it will address how to identify and screen these learners, and meet their self-esteem, socio-emotional and academic needs. It will discuss how a comprehensive team approach should include: appropriate identification including diverse assessments and alternative plans; infused multicultural education; counseling and guidance; training in goal setting and conflict resolution; and community engagement. The essential role of professional development of teachers will be described through an advocacy project conducted in a school district in central Florida, that sought to increase enrollment and services to meet the needs of underserved high ability/gifted students.

F.27 Joan Jacobs; Sue Harvey. ***He's Too Naughty to be Gifted: Using Differential Diagnosis to Increase Identification*** **(F.27)** Gifted students have needs that are created by their strengths rather than by deficiencies (Roberts, 2009), and schools need to respond to each student as an individual set of strengths. Unfortunately, many schools fail to consider giftedness until negative behaviors have ceased, leading many bright students to be labeled for a variety of services other than gifted. This orientation can significantly impact the diversity of the program and whether it represents the larger population of the community. When educational professionals focus on children's deficits rather than strengths, they miss opportunities to make a difference in the child's life and learning. Gifted programming may then seem more like a reward for compliance than an academic intervention. Likewise, teachers often focus on skill acquisition and learning objectives rather than on conceptual thinking, much to the detriment of their gifted students. Presenters will consider how, if we look at the student through another lens, we may be more likely to appreciate creative responses, unusual behaviors, and learning styles. By incorporating differential diagnosis techniques from medicine, we can improve student behaviors, view children in a positive light, and increase identification. Presenters will suggest a variety of profiles for identification, including ringleaders, students who lack executive function, and students with other special education labels. Participants will learn how to use natural consequences to help students make positive decisions.

F.28 Kim Nettleton. ***Gifted Before Kindergarten? Identifying Gifted Children during their Preschool Years*** **(F.28)** Identifying gifted students may be problematic, but gifted students do not suddenly spring into being when they become school age. Many early childhood educators, however, do not know how to identify gifted children and foster their potential. Asynchronous development may make identification even more difficult for parents and educators. While profoundly gifted children may be easy to identify, the indicators may be harder to discern for other children. More than a checklist, this session will share concrete examples of early childhood behaviors, discussions, and activities that can aid parents and educators in realizing the talents and gifts of children under five.

F.29 Mara Shurgot. ***Partnering to Identify and Serve Academically Gifted Students in India*** **(F.29)** The Duke University Talent Identification Program (TIP) is a world leader in the identification and support of academically gifted students. Since 1980, Duke TIP has served over 2.5 million students. In 2007, Duke TIP embarked upon an effort to identify and serve academically gifted youth in India, an endeavor characterized by valuable lessons, increasing impact, and evolving global partnerships. Duke TIP launched a pilot of its three-week, residential Summer Studies Program in May 2008 at the Indian Institute of Management, Ahmedabad for 34 academically talented 8th standard students. Participants attended select schools and foundations and were chosen based on a combination of test scores, personal recommendations, and a gifted rating scale. The program was received with great enthusiasm and has been held for an increasing number of students each year since. In August 2010, in an effort to identify talented students from a much larger and more diverse population, Duke TIP, in partnership with India-based Educational Initiatives, the creators of the ASSET test, launched the Duke TIP in India Talent Search. The search is based upon Dr. Julian Stanley's above-level testing model. In November 2012, Duke TIP signed an agreement with Shiv Nadar University (SNU) to open a Centre for Gifted Education in SNU's College of Education. The Centre will serve as a nexus of programming, research, and resources for academically gifted students, their families, and educators in India. Duke TIP and SNU recently hosted a two-day conference for educators, "Understanding and Serving Academically Talented Students" held in New Delhi.

F.30 Marie Thillot; Maria Pereira Da Costa. ***A Multidimensional Approach of the Gifted Children Identification*** **(F.30)** Existing tools used to identify high potential children do not allow the grasp a child's wider potential. The aim of this research is to underline the major interest of a multidimensional identification based on valid measures, on various evaluation criteria and on multiple information sources. Indeed, the wealth of variability of high potential children's psychological profiles makes it difficult to build a comprehensive clinical picture of their characteristics. Therefore, this study refers to 77 children with an average age of 8.9 months, from 2nd to 5th grades of primary school. Two groups were determined through their intellectual ability- gifted children (n=40) and nongifted children (n=37). They were assessed on their creative potential (EPoC, Todd Lubart & al., 2010), thinking and learning styles (respectively Sternberg's inventory of thinking style, 1997, and the learning style and strategies, Felder and Solomon, 2001), personality (CAPS, Children and Adolescent Perfectionism; Flett et Hewitt, 2002) and teacher's evaluations. The research showed specific profiles among gifted children as compared to their personality traits. Robust indicators of high potential were found within teachers' evaluations, suggesting they could contribute to identifying high potential children. The results highlight the benefits of a multidimensional approach of high potential characteristics and reveal the need to take into account high potential children's requirements in education programs.

G.21 Albert Ziegler; Bettina Harder; Manuela Mahn; Susanne Trottler. ***The Development of the Nuremberg Gifted Identification Checklist*** **(NGIC) (G.21)** Ideally a gifted identification checklist should meet three requirements: 1) It is in compliance with quality criteria of empirical social research such as objectivity, reliability, and fairness; 2) Its predictive validity (i.e. the extent to which it predicts high abilities) is high; 3) It is informative for gifted educators. In this contribution we will focus on the development of the Nuremberg Gifted Identification Checklist (NGIC). NGIC is based on the Actiotope Model of Giftedness. Teachers assess the educational resources and learning resources of their pupils by indicating their absence or presence on a 15 item checklist. Four studies with students in the age range from 8 to 16 proved excellent psychometric characteristics of the scale and had very satisfying levels of predictive validity. Correlations of the NGIC and standardized achievement tests (reading, spelling, math) were usually above r=.50, i.e. comparable to correlations of achievements with IQ. Last but not least, as each item measures a specific educational or learning resource, the results of the checklist are of direct importance for developing a specific learning pathway for an individual learner.

G.22 Bui Nguyet Anh. ***Uncover the Inborn Talents via Fingerprint Analysis*** **(G.22)** Every individual has his/her own unique fingerprints, which are a gift from family ancestors and parents. Based on the analysis of each fingerprint, we

can discover the inborn characteristics, inborn talent attached to each part of the brain such as: talents in mathematics, physics, arts, sports, and music. Through more than 1 million tests in Asia, we can show the accuracy of the fingerprint analysis test up to 95%. Considering as an assessment tool for discovering the inborn talents and to set an orientation in education and job selection, a fingerprint analysis test can bring considerable information for each individual to have more confidence in her/his own capabilities. A fingerprint analysis report can provide following information: (a) 10 fingerprint types; (b) Nerve growth factor index attached to pattern and ridge count index: through this index, we can determine 10 capabilities attached to 10 fingers as follow: Leadership; Imagination; Body Movements; Music and Sounds; Vision and Art; Appreciation; Management; Logical thinking; Body Control; Languages; and Reading and Observations. (c) Index of learning methods: active learner, reflective learner, kinesthetic, audio and visual learning methods; and (d) % of each type of intelligence based on the Multiple Intelligence by Howard Gardner from Harvard University. The report can be very useful for educators, career advisors, human resources managers, psychologists, nutritionists, ... and also strategic bodies of the Government in selecting the competitive advantages for the countries.

G.23 Tan Ee Lyn June. ***Assessing Critical Thinking Skills: Charting a Singapore School's Difficulty in Assessing CTS Formally*** **(G.23)** River Valley High School (Singapore) has been assessing CTS formally and explicitly in our *Create, Integrate and Differentiate Program* from Years 1 to 4 (Grade 7 to 10). Over the years, difficulties arose in the assessment of CTS despite the use of clear rubrics. Assessment difficulties that range from the assessment validity (eg. lack of objectivity) to practical issues (eg. lack of sufficient interaction time to assess accurately) made this assessment one that was more externally motivated than a means to guide the student in their progress to become master thinkers. Focused Group Discussions by various stakeholders, followed by more feedback from was the approach used. The findings showed that a radical change in how we assess and report CTS was necessary. This work in progress in our school highlights the difficulties experienced when a school assesses CTS formally in all levels and across all subjects.

G.24 Tracy Inman; Brittany Crowley. ***Teacher Identification of Children with High Ability in Math and Science*** **(G.24)** The goal of the five-year, partially Javits-funded Project GEMS (Gifted Education in Math and Science) was to design and implement a model demonstration project that will increase the number of elementary children who are advanced in science and math and to foster their interest and achievement in science, technology, engineering and mathematics. This goal specifically targeted children from low-income backgrounds and minorities who are underrepresented in science, technology, engineering, and mathematics (STEM) careers. Being able to identify students with high levels of interest in math and science allows educators to provide advanced instruction to them, ultimately resulting in higher achievement. One objective was to establish a protocol for recognizing and identifying advanced ability in science and math among elementary children. This protocol included assessment instruments that corresponded to Lohman's 2008 recommendations for identifying gifted students. A key component was the newly-created teacher identification form for math and science based on facets of well-developed individual interest as conceptualized by Hidi and Renninger (2006). A combination of math and science achievement test scores, a nonverbal measure, teacher math identification scores, and teacher science identification scores were used to identify students for accelerated programs. This session examines the teacher identification forms which evidence preferred levels of reliability and validity. Utilizing these forms as part of the identification protocol appear to be a better way to identify students for gifted programs compared to utilizing only standardized test scores or teacher recommendations.

G.25 Wendy Behrens. ***Identification and Support of At-Risk Highly Able Learners*** **(G.25)** Populations of the world are increasingly mobile and diverse. Preparing the education professional to recognize and respond to the needs of students from diverse, at-risk populations is critical to student achievement, post-secondary success, and ultimately the future. For diverse learners living in poverty, the issue takes on a special poignancy. The cruel reality is that these learners are most likely to receive instruction from teachers with the least training in schools with the most severely limited resources. Sadly, all too often, students in these circumstances are victims of the soft bigotry of low expectations where little is expected and little is encouraged. Cultural competency, the ability of people to successfully interact with and understand others whose culture differs from their own is an increasingly important skill for all educators. For educators of the gifted, cultural competency is the skill set necessary to support and assist in the identification of underrepresented populations. Gifted learners from diverse backgrounds may need complex support in which the hidden rules of culture are acknowledged and respected. As education professionals it is our obligation to ensure these systems exist. This session will provide practical strategies for the identification and support of at-risk highly able learners.

3 – CREATIVITY: THEORY, RESEARCH, AND PRACTICES

D.1 Angie L. Miller. ***Comparing Creativity Scores for Honors College and General Education College Students*** **(D.1)** Previous research suggests that gifted students exhibit higher levels of creativity, as compared to other non-gifted students. Furthermore, many current theories and models include creativity as an important component of giftedness (see Miller, 2012 for a review). This study examines whether creativity is more prevalent in high ability young adults as well. Scores on the Scale of Creative Attributes and Behaviors (SCAB; Kelly, 2004), a self-report measure of creativity, were collected online for a sample of 323 Honors College students and 226 general education students at a mid-sized Midwestern university. A series of t-tests were conducted for overall creativity score, as well as for the SCAB subscale scores of Creative Engagement, Creative Cognitive Style, Spontaneity, Tolerance, and Fantasy. The results suggest that the Honors College students exhibit significantly higher overall creativity. This pattern also appeared for some, but not all, subscales of the SCAB. Specifically, the Honors College sample is significantly higher on the Creative Engagement and Creative Cognitive Style subscales; however, the general education sample is significantly higher on the Spontaneity subscale. Effect sizes for these differences are small to moderate. These results provide further evidence for the inclusion of creativity in models of giftedness. These differences between high ability and general education college students also highlight the importance of replicating research on creativity and giftedness in a variety of samples. Researchers can use this knowledge in the development of further research questions and designs while teachers and administrators can learn about characteristics and behaviors of gifted young adults.

D.2 Antonine Goumi; Maud Besançon. ***Textisms in SMS and Creativity of SMS' Writers*** **(D.2)** Studies on SMS and teenagers have exploded the last few years. Results show that there is a link between textisms (change in a word's orthographic form compared to traditional writing) and students' literacy skills (*Journal of Computer Assisted Learning*, 2011, *27 (1)*). Only one study has investigated the link between cell phone use and creativity (Jackson et al., 2012). In the present study, the participants were 24 girls and boys (mean age 21 years, *SD=1.44* years) enrolled into a psychology course at a French university. They were asked to write SMS on their phones (under real life scripts) and passed the EPoC battery (Evaluation of Potential of Creativity, Lubart et al., 2011). Our results focus on: (1) the density of textisms produced by the participants while writing SMS; (2) the level of divergent and integrative thinking (verbal and graphic domains) of the writers. We distinguished between two types of textisms: (a) consistent with the traditional written French code (*lov* for *love*) *Vs.* (b) breaking with the traditional code (*gr8* for *great*) (Bernicot et al., 2012). The second ones are the most representative of SMS teenage language. Results show a negative and significant relationship between textisms breaking with the code and verbal creativity ($r = -.53$ and $r = -.41$, $p<.05$ for divergent and integrative thinking respectively). Moreover, students who produce less textisms breaking with the code have the greatest amount of verbal divergent thinking ($t(22) = 2.13$, $p<.05$) and graphical integrative thinking ($t(22) = -2.47$, $p<.05$). Results are interpreted in terms of declarative knowledge in long term memory.

D.3 Besançon, M.; Ben Mamer, S.; Fenouillet, F. ***Creativity, Motivation, Wellbeing and Interest in Various Learning Environments*** **(D.3)** Studies on the development of creativity have highlighted the impact on learning environments (Besançon & Lubart, 2008). In particular, pedagogical approaches are hypothesized to differ concerning their emphasis on individual initiative, and action-based learning. Moreover, we hypothesized that pedagogical approaches impact also global and school wellbeing (Diener, Emmons, Larsen, & Griffin, 1985; Huebner, 1994), interest (Schiefele, 2009), Intrinsic and extrinsic motivation (Deci & Ryan, 2002), self-efficacy (Bandura, 2003), feelings of relatedness (Richer & Vallerand) and flow (Csikszentmihalyi, 2000). This study focuses on children's profiles concerning creativity, on different kinds of motivation and wellbeing according to their learning environments (traditional pedagogy with or without notes and alternative pedagogy – Steiner School). Children are schooled in Paris suburbs in first or second year of college. We used EPoC (Evaluation of Creative Potential, Lubart, Besançon & Barbot, 2011) to measure the creative potential and various questionnaires for motivation, wellbeing and interest.

D.4 Besançon, M.; Chauvin, R.; Fenouillet, F. ***Creativity, Motivation, Wellbeing and "French" Baccalaureate*** **(D.4)** This study examines the link between creative potential (EPoC in verbal domain), motivation (intrinsic motivation, self-efficacy) and wellbeing of 150 students in high school. Four measures of creativity were used: two verbal divergent thinking tasks, and two verbal integrative tasks (EPoC, Lubart, Besançon & Barbot, 2011). Moreover, we hope that students give us after their "baccalaureate", their choice and results (in June). Our hypotheses are that (1) there is a link between creativity and intrinsic motivation (Amabile & Gitomer, 1984); (2) there is a link between intrinsic motivation and wellbeing (Waterman, Schwartz, Conti, 2008) so (3), there is a link between creativity and wellbeing.

Finally, we hypothesised that creativity relies on the subject's choice during the baccalaureate (the more creative are the students, the more they choose the subject "invention"). Implications for the development of creativity in high school are discussed.

D.5 Burak Turkman; Sonya Turkman. ***Boosting Creativity Through Art Enrichment*** **(D.5)** The research aims to show how to increase students' divergent thinking ability by using art in an array of K-12 science classrooms. Recent researches show that Realistic Divergent Thinking (RDT) tests are better predictors of creative performance than earlier tests. The RDT takes examples from people's real life environment, involving the participant in the process very strongly and vividly. Our proposed model shares many similarities with the popular problem based learning (PBL) strategy. In PBL strategy, students get involve in projects by describing all details, problems, and data from their environment. These include maps, visual data, interviews, and audial data. In light of these facts art can be a great tools to boost students' divergent thinking ability and therefore increasing creativity. Students will collect all data pictures, maps, audial records etc. and share these things with their teammates by making an art piece to explain existing theories, to discuss issues and to explore possible solutions. It will encourage students to become deeply involved with their project and help to visualize all details in order to produce creative products. Additionally, we are proposing that using problem-based visual and audial creativity tests will increase the predictive validity of this kind of instruction increasing creative behavior. We will develop a visual and audial component to enrich the existing Uses and Instances Divergent Thinking creativity test. The control group will not receive art in the classroom and will take the existing Uses and Instances Divergent Thinking test. The experimental group will receive art training and take the Enriched Uses and Instances Divergent Thinking test. We will analyze the data to compare the effectiveness of the art in classroom to the scores on both tests.

D.6 Carol Swalley; Kathy Sather. ***Crafting Creativity into the Common Core*** **(D.6)** As 45 states, the District of Columbia, 4 territories, and military bases transition to the Common Core Standards, advocates for gifted students wonder where creativity fits within this new lens on learning. While these standards increase demands for non-fiction text and critical and analytical writing in response to complex texts, what are the implications for creativity in the classroom? Can gifted students still develop their creativity within the rigorous standards of the Common Core? Yes! This session will use Sternberg's Creativity framework and the 7 facets of creativity to look at the changes in the common core from a new point of view. We will use these facets to show how teachers can still craft creativity into rigorous common core lessons. Presenters will use the lens of infusing creativity to revisit elementary standards in English Language Arts/ Literacy, Mathematics and other content area instruction. Participants will have opportunities to question and reflect collaboratively or independently on how they might light the creative fire as they incorporate these ideas into their new Common Core aligned lesson and unit designs.

E.7 Cheng Li; Wang Yinmei; Liu Zhengkui; Cheng Xia. ***Studies of Teaching Intervention on Creativity of Migrant Gifted Children*** **(E.7)** Migrant gifted children possess a high level of intelligence and a low level of social support. Longitudinal studies have shown that the creativity of migrant children is handicapped by a deprived school environment. Teaching intervention with an emphasis on creativity was implemented into an education program for migrant gifted children to test whether a positive teaching environment and greater awareness of multicultural life experience benefits the development of migrant children's creativity. Teachers were provided with a sixteen-hour long creativity education training that emphasized promoting teaching skills that encourage creativity knowledge, thinking-styles, and motivation without changing the original structure of courses. The effectiveness of the training was measured by determining the changes in in-classroom creativity-teaching-behavior before and after a one-semester intervention. The results indicate that students showed significant increase in creativity-related knowledge, thinking style, personality and motivation after one-semester of intervention. This suggests that: (a) teachers' creative teaching behaviors can be increased effectively through training; and (b), teaching intervention of creativity can significantly improve the creativity level of migrant gifted children.

E.8 Cyd Rogers; Marianne Solomon. ***Crafting Creativity through Community Problem Solving*** **(E.8)** In this ever-changing global society, our students are becoming more and more aware of the impact they can have on others as they aspire to become contributing members to a global community. Through their own creativity and the Community Problem Solving Program (a component of the Future Problem Solving Program International), students learn to identify a community challenge, brainstorm effective solutions, and develop an action plan to solve that challenge. Utilizing brainstorming, thoughtful planning, and critical thinking, the students develop an action plan that they themselves can put into practice. Next, students actually implement their action plan! Throughout their endeavors, the students develop

teamwork and leadership skills, polish writing and researching abilities, and utilize technology and media techniques while simultaneously striving to use creativity and innovation. Community Problem Solvers are encouraged to enhance creativity by seeking ways to form community partnerships and earning support from a variety of community groups so that their projects benefit the global community. In addition, the program strengthens the students' altruistic values as they become globally aware of those in need. Throughout the community problem solving process, students acquire life-long learning while engaging themselves, those they have served and the global communities they serve as well. Create the power of students through the Community Problem Solving Program!

E.9 Diana Boyanova. ***How to Differentiate CREATIVITY Among the Creativities – the "Conflict" Between Abilities in Chilean Students with Academic Talent*** **(E.9)** Previous research demonstrated that among students with academic talent, analytical abilities measured by Berlin's Intelligence Structure Model (BIS) (Jäger, 1982 in Bucik, 1996) were negatively correlated with creativity (measured by a task to create a toy using color stickers). This was found to contrast with students without academic talent, where the significant correlations were in a positive direction. The present study expands this research further. A total of 2091 third and fourth grade students were evaluated with a test based on the BIS model. The goal of the study was to explore the relationship between the "create a toy" creativity and the three operational facets from BIS model – numerical, figural and verbal creativity. Results revealed a negative correlation of "create a toy" creativity with both figural and verbal creativity among talented fourth grade boys. For talented girls, numerical creativity was negatively correlated with the "create a toy" creativity. Older girls performed better in "create a toy" creativity compared with all other students, whereas older boys had the highest scores in numerical creativity. The findings suggest that even at an early age, there are both gender and age differences in creativity and children differ in the classes of abilities in which operations of creativity are performed.

E.10 Eunice Maria Lima Soriano de Alencar; Denise de Souza Fleith; Clarissa Nogueira Borges; Evely Boruchovitch. ***Obstacles and Strategies for Fostering Creativity in the Classroom according to Brazilian Coordinators for Learning and Curriculum*** **(E.10)** This study examined the perception of coordinators for learning and curriculum concerning factors that may inhibit teachers' stimulating creativity in the classroom and strategies the pedagogical coordinators could use to help teachers fostering the students' creative development. Sixty-six public and private elementary school coordinators completed a checklist of obstacles faced by teachers to foster creativity in the classroom and four open questions in respect to what they could do to support teachers in promoting students' creativity and on how to eliminate the factors that block teachers to nurture creativity in the classroom. Findings revealed that the most frequent obstacles indicated by the participants were teachers' lack of knowledge of strategies for nurturing students' creativity, teachers' insecurity to test new educational practices, and low recognition of the teacher's work. In-service training, guidance and incentive to teachers were the aspects more highlighted by the participants to support teachers in the process of fostering the students' creativity. These aspects were also pointed out as necessary to eliminate the factors that hamper teachers to foster the development of students' creative abilities. The results suggest that, according to the participants, teachers are not well equipped in terms of pedagogical strategies that might help them to foster creativity in the classroom. Other aspects that also influence creativity in the classroom, such as the curriculum structure and the pedagogical coordinators' training and preparation were not pointed out.

E.11 Patti Drapeau. ***Articulation and Alignment: Identifying Creatively Gifted Students, Providing Services and Utilizing Assessment Tools*** **(E.11)** A concern for creativity and accountability has directed research on creativity towards the study of unambiguous expressions of talent. This is problematic for educators who are interested in designing programs for creative potential. Our identification system is dependent upon what definition we use to define creativity. Much of our identification has been based upon the definition from two waves in creativity research - the personality approach and the cognitive approach. Teachers rely upon creativity strategies and techniques to promote creative thinking in their classrooms. A lack of tools to report student growth, maintenance or decline in the area of creative ideation and production make it difficult to defend programming for the creatively gifted. Sawyer (2012) calls for combining the personality approach, cognitive approach and the sociocultural approach into a definition called the interdisciplinary approach to creativity. Examples of tools to identify students that align with this definition will be shared with the audience. The interdisciplinary approach utilizes creativity tools in groups to generate innovation. This idea is supported by Wagner (2011) who compares the culture of learning that is based upon individual achievement to the culture of innovation that is based upon collaboration. Samples of gifted students' products along with creativity assessment tools will demonstrates the use of the interdisciplinary approach in practice. A defensible program for creatively gifted students aligns identification, services and, program evaluation.

E.12 Ginger Lewman. ***Kindling the Inner Fires of Creativity: Learning by Doing*** **(E.12)** In this presentation, participants will explore project-based and passion-based learning and how "learning by doing" shifts the focus in the classroom from teacher-centered to student-centered. Participants are introduced to the concept of "Optimal Ambiguity" as a prime state for helping students begin to take charge of their own lives to become independent learners.

E.13 Hang Eun Lee; Yoon Jo Lee; Jeongkyu Lee. ***The Study for the Creative Characteristics of Gifted Students in Invention*** **(E.13)** This study was designed to conceptualized creative characteristics of the gifted students who are very talented in invention and problem solving by analyzing of subscales of the Torrance Test of Creative Thinking (TTCT) focusing on the personal factors (gender, age). In this study, the inventively gifted students showed high level of diversity in their level of creativity (creative index and each subscale of the TTCT), and they were tend to be individualized in terms of their creativity. In this study, we found a significant positive relationship among subscales of the TTCT. It indicated that there is a relatively strong association among specific areas of creativity. It is corresponding to the previous research (Kim, 2011) regarding to creative styles (adaptive style, innovative styles.) We also found a gender difference based on female gifted students' superiority on some subscales of the TTCT, including elaboration, abstractness of titles, resistance to premature closure, creative strengths and creative index. However, we could not found a significant group differences between middle and high school gifted students on their creativity and it indicated that any developmental changes did not appeared during the period of middle and high school in this study. Based on the result of this study, we provided some educational implementations in the field of invention gifted education, including a need of continuous support for gifted students in terms of their creativity during the period of middle school and high school, and a serious consideration of in-depth information of individual's creativity (level of creativity, style of creativity).

E.14 Helga Pfeifer. ***We Create – Therefore We Change*** **(E.14)** In a time like ours the importance of creativity cannot be esteemed highly enough. In order to deal with the complex issues that we, the human species, will have to solve in the future we urgently need to view the world from a different perspective, one that is grounded in our knowledge of the unity of the world. The ideas presented will highlight a few successful examples of how we can use creative ideas for gifted students in language teaching to reach out to the world and maybe make a difference thereby highlighting issues like "The Creative Teacher", "The Creative Classroom" and "Making a difference: Issues that Move Us." The presentation aims at teachers interested in keeping in touch with their own sources of creativity who teach creatively gifted students of the secondary level and university students. The projects that we will look at arise out of the awareness that it is our creative impulses that connect us (teachers and students) with our deepest selves and our highest visions, with the issues that move our hearts, and show that creativity can thus support us in our endeavors to shape a world based on mutual respect and appreciation. When we are immersed in creating we are connected with something bigger than our individual selves, with a force that helps us transcend our egos and realize the truth of the fact that we are all one.

E.15 Hope E. Wilson; Jill L. Adelson. ***Artistic Gifts and Talents: The DMGT2.0 in an Artistic Context*** **(E.15)** This presentation will provide an overview of the DMGT 2.0 model and then apply each of the elements to the artistic domain, ending with how teachers and administrators can influence the talent development process. Giftedness, or natural abilities, is comprised of the following mental elements: intellectual, creative, social, and perceptual; and the following physical elements: muscular and motor control. Each of these elements directly relates to the visual arts, such as the perceptual and motor aspects of observing and creating art, the creative intuitiveness of the artistic process, and the intellectual aspects of artistic thinking. Talent, on the other hand, consists of the systematically developed skills in the DMGT2.0. The arts are one of the fields of competency identified by Gagné but could be further delineated into specific areas of artistic talent (such as painting, drawing, ceramics, sculpture, art criticism, art history, etc.). The process of developing gifts into talents is affected by intrapersonal catalysts that include physical and mental traits as well as goal management (i.e., awareness, motivation, and volition) as well as environment catalysts that include milieu, individuals, and provisions. The developmental process that these catalysts act upon is made up of activities, progress, and investment. Although practitioners cannot force the developmental process and students must contribute, practitioners can contribute to the child's environment, influence the child's intrapersonal catalysts, and influence the development process of students with gifts in the visual arts through purposeful planning of classroom environment and activities, development and nurturing of student dispositions, and recognition of student achievement.

E.16 Jana Skrabankova; Josef Trna. ***The Model of Teacher Creativity and Selection of Educational Methods for Gifted Students in Science*** **(E.16)** Creativity is a special set of skills that enable creative activity, resulting in something new, original, or creative problem solving. Creativity in science teaching is the basis for the development of students'

giftedness. Creativity is closely connected to the selection of teaching methods which develop giftedness. The purpose of this study is to find a relation between teacher creativity and specific educational methods for gifted students. The basis of the study is the Analytical-synthetic model of teacher creativity in connection to the selection of teaching methods for gifted students. The use of our model can improve the efficiency of the development of giftedness. The model emphasizes the position of teacher creativity in the selection of teaching methods. Our research data show the influence of selected teaching methods on the effective development of giftedness. The following theoretical and empirical research methods have been used in our study: data mining, modeling, design-based research. Data mining is a modern scientific method which allows us to accelerate the knowledge in the field of gifted education. Modeling logical structures of sets of branches is becoming a European, even a world trend as well. The trend is getting into the pedagogical sphere, too. The aim of this modeling is to offer a rounded-off structure of information to students, which can be accepted within the scope of a logical system of science without any necessary simplification. The results of our research can be used in practice and should be implemented in the professional development of science teachers. Key words: Analytical-synthetic modeling, creativity, data mining, educational methods, giftedness, science education.

E.17 Janet Tassell; Marge Maxwell; Rebecca Stobaugh. ***The CReaTE Framework: A New Lap in Learning*** **(E.17)** Gifted children crave meaning. They want assignments to have dimensions and substance that give them the opportunity to even crave for more on the same topic. Often, classrooms are full of worksheet curriculum materials that are sterile in connections to what is currently happening in the real world or do not allow for meaningful bridging to learning. What could possibly help with this scenario? The CReaTE Framework, adapted from an evolving lesson plan framework (Maxwell, Constant, Stobaugh, & Tassell, 2011), can guide students, parents, and teachers in thinking about learning in a different yet comprehensive way. Through CReaTE, all meaningful components are addressed to add depth to learning. The components of CReaTE are: Cognitive complexity, Real world learning, Technology integration, and Engagement. Teachers can use these four components to guide their lesson planning. Note that the lower levels are "Teacher-Directed" whereas higher levels are more "Student-Directed" with the teacher partnering with students to design projects and assignments. For classrooms looking for a way to boost student learning while engaging in authentic higher-level thinking tasks where students are fully engaged in their own learning, this is a superb tool to heighten meaningful learning.

E.18 Jeb Puryear. ***Metacognition and Creativity: A Developmental Perspective*** **(E.18)** Cognitive development and developmental theories of creativity bare a strong resemblance. When considering a Piagetian perspective, transformations during the learning process are personalized meaning individual constructions can involve creativity. Vygotsky's work opens the door to further developmental study by considering the implications and interactions of social influences, conventions, and personal implications for creative development. It also guides researchers to a framework of evaluating creative potentials rather than simply creative products to provide a more holistic picture of an individual's creativity. This has far reaching implications for assessment, particularly for those working with children in school settings and with those individuals functioning at early developmental levels of creativity. Techniques generally associated with cognition studies, such as micro genetic methods that investigate development as it occurs, may prove useful when viewing creativity in this way, but these approaches do not provide predictive power on their own. Just as parallels between creativity and learning development are examined, elements of metacognition can be examined in both types of development. It is argued that researchers should consider these elements of metacognition as part of creativity studies paying particular attention to the interaction effects that these factors have with traditional measures of creativity. These sorts of studies have been proposed over the previous two decades, but the literature remains alarmingly thin. An upcoming study examining the relationship between metacognition and creativity development among students in university creative writing classes is discussed.

E.19 Jiangtao Gao. ***Probing Effective Ways of Nurturing the Creativity of Gifted Students at an Early Age*** **(E.19)** Based on the philosophy of cultivating Healthy Personality, Lofty Moral Character, Innovativeness, and Inquisitiveness in gifted children, we have been proactively exploring advanced curriculum above and beyond the national standards. Unlike the traditional classrooms, ours are students-oriented and provide students the stage they need for learning. In addition, multi-mentorship system optimizes the resources of our teachers to handle the issue of the lack of full-time teachers for the gifted program. We also rebuild the evaluation standards for extraordinary teachers. We have been probing the way of building the consistency across middle school, high school and college by capitalizing on each system to benefit all and build the green pathway to cultivating top-notch innovative talents. We also seek to build multi-facet evaluation system and growth record for further follow-up studies.

E.20 Linda Sheffield. ***Creativity and Mathematics: Conflicting or Complementary?*** **(E.20)** As with all students, mathematically promising students deserve a learning environment that fuels creativity and passion. To do this, we must create a larger and more diverse pool of enthusiastic, engaged mathematically promising students that develop their mathematical talents, creativity, imagination and potential. The US joint publication from the National Association for Gifted Children (NAGC), the National Council of Teachers of Mathematics (NCTM) and the National Council of Supervisors of Mathematics (NCSM), *Using the Common Core State Standards (CCSS) for Mathematics with Gifted and Advanced Learners,* includes a significant proposal for adding a ninth Standard to the eight CCSS Standards for Mathematical Practice on creativity and innovation. "9. Solve problems in novel ways and pose new mathematical questions of interest to investigate." Characteristics of this proposed Standard include taking risks, embracing challenge, solving problems in a variety of ways, posing new mathematical questions of interest to investigate, and being passionate about mathematical investigations. In this session, we will examine research and suggestions for developing mathematical creativity, including: (i) Teaching and learning strategies to challenge, excite, and develop mathematical creativity; (ii) Proven mathematics curriculum, including *Project M^2: Mentoring Young Mathematicians, Project M^3: Mentoring Mathematical Minds,* and *Math Innovations*, that support and enhance mathematical creativity; and (iii) Extracurricular activities that augment this development. Participants will be actively involved in solving and posing mathematical problems that illustrate exemplary teaching, learning and assessment practices designed to challenge, engage, and develop mathematical talent and creativity. This will include online games and interactive white board activities.

E.21 Connie Phelps; Angela Sauerwein. ***Encouraging Creative Play in Intellectually Gifted Middle School Students*** **(E.21)** Researchers in psychology and education have observed the power of creative play in developing cognitive and social development in an academic setting. During the past several decades, the amount of time children spend in creative play during school has declined (Gray, 2013). Most classroom time involves highly structured activities, homework, and participation in adult-directed activities such academic competitions and athletics. Kim (2011) found a correlation between declining free play opportunities and declining scores on the Torrance Tests of Creative Thinking. While creative play for intellectually gifted learners is often overlooked in instructional planning, educators can effectively implement creative play to achieve academic outcomes. Creative play promotes competence by providing a safe environment for students to explore, discover, take risks and make mistakes. In these situations, gifted learners may improve resiliency, increase independence, and gain social competence. Positive relationships are formed between learners and teacher, often through humorous exchanges. Since passion and intrinsic motivation of individuals often appears during creative play, the practice also advances the talent development of gifted students in their individual strengths and interest areas (Brown, 2011). Educators of the gifted can model creative play as a reminder of what play is, and more importantly, to encourage the acceptance of creative play in an academic environment. This session promotes creative play as an instructional methodology and a teaching philosophy in gifted education. Presenters will share practical strategies and resources to incorporate creative play with viable academic outcomes for early adolescent gifted learners across the academic curriculum.

E.22 Abdulnasser Alhusaini. ***What Is Creativity? Teachers' Beliefs about Creativity in Students' Written Stories*** **(E.22)** The purpose of this study was to explore teachers' conceptual beliefs about creativity, as assessed by the criteria they used to analyze students' written stories in two separate studies. Using the Consensual Assessment Technique (CAT), 17 elementary school teachers from diverse backgrounds in the urban Southwestern United States rated students' creativity in a total of two studies (Alhusaini & Maker, 2010; Alhusaini & Maker, 2011a). In the first study, 11 teachers analyzed the stories of 67 male and 70 female students from kindergarten, first, and second grades. In the second study, six teachers rated the stories of 67 male and 72 female students from third, fourth, and fifth grades. In both studies, teachers were required to use a list of clearly established guidelines in which the final step was to report the criteria used to evaluate students' creativity. Teachers' reports, which comprised 51 documents, were organized and analyzed. The authors developed a framework as grounded theory. After coding and analyzing the data using NVivo software, the authors identified 8 major themes: (a) fluency, (b) voice, (c) originality, (d) imagination, (e) elaboration, (f) complexity, (g) making connections, and (h) writing clarity. Future researchers were encouraged to challenge the identified themes by replicating the current study in many places and in a variety of domains to enrich the theory of Creativity as a Social Construct (CSC).

E.23 Patti Drapeau. ***Using Neuroscience to Maximize Imagination, Creativity and Innovation in Gifted Students*** **(E.23)** The creativity gap is defined as the degree of difference between creativity ability and the need for creativity (Josh Linkner, 2011). In the school environment, this gap is most evident in the academic areas because gifted students see

little need to express their creativity in a standards based environment. Neuroscience provides us with evidence as to the importance of addressing creativity. If a region of the brain is stimulated repeatedly, the connections between neurons (nerve cells) in that region will be strengthened and new cells may be added. When gifted students use these neural pathways their creative ability increases. The brain seeks patterns and pleasure as prime motivating factors. Gifted students seek pleasure through humor, mental manipulations and challenge. Their brains are wired for attention through novelty and curiosity (Judy Willis, 2013). With gifted students, we look for ways to explore more flexible patterning skills so that the brain thinks outside the box instead of relying on repeated patterns. Gifted students find pleasure in expanding literacy with media criticism and media making, utilizing web 2.0 interaction instruction, and engaging in global network teamwork. Resource based learning provides ways to target novelty, curiosity and imagination. Examples of how these tools are used in the 21st century classroom will be shared with participants. We can use what we know from neuroscience to help us educate for creativity and innovation in gifted students.

E.24 Marianne Solomon. ***Future Problem Solving Program International: Teaching Students How to Think*** **(E.24)** Future Problem Solving Program International (FPSPI) was designed by Dr. E. Paul Torrance in 1974 to encourage creativity in gifted curriculum and increase students' interest in the future. Since that time, FPSPI has expanded and now offers various enrichment opportunities through the following components: Global Issues Problem Solving, Community Problem Solving, Scenario Writing, and Action-based Problem Solving. It is critical that students learn how to overcome obstacles or barriers by confronting challenges and developing solution ideas to social, political, scientific, economic, and technological issues. These components provide learning opportunities and competitions in problem solving for high-achieving students around the world. Creative problem solving allows gifted students the opportunity to express ideas and opinions about the future while learning how to become active participants in shaping the future. Participants in this session will learn how they can use the FPS components to encourage creative and critical thinking, develop creative writing tools, promote leadership skills, and increase the academic aptitude of their students. The presentation will describe the creative problem solving framework utilized in the Future Problem Solving Program, explain several components of FPSPI, share examples of ways that FPSPI empowers students to be successful problem solvers, present several resources for linking process skills with academic content standards, and share information about how to participate in Future Problem Solving Program International.

E.25 Marie Thillot; Maud Besançon; Todd Lubart. ***EPoC – A New Social Creativity Domain*** **(E.25)** Creativity is a crucial concept in modern societies that require new ideas to solve problems. Creativity is defined as the capacity to realize a production which is new (or original) and adapted to the constraints of a situation or a domain of expression. At present, some standardized measures allow creative potential to be estimated by evaluating isolated cognitive (e.g. divergent thought) and conative aspects (e.g., creative personality) involved in the expression of this potential. The main purpose of the battery of Evaluation of the Creative Potential (EPoC) is to evaluate divergent / exploratory thinking and convergent / integrative thinking which are both involved in creativity, with the aim of diagnosis (e.g. high creative potential) and description of a creative profile in various domains (verbal, graphic). This profile can be used to direct the development of the creativity in an appropriate way. We will present the results of a new part of the EPoC battery, tests proposed in the field of the social creativity. An initial study on a sample of French elementary school children examines links between the performance in social creativity tasks and those in the verbal and graphic domains.

E.26 Mohammad Awad Rawas; Abdulnaser Fakhrou; Mohammed Mohsin Alrashdi. ***A Smart Story*** **(E.26)** A Smart Story was created by Dr. Fakhrou based on some techniques to develop thinking skills and creativity in listeners. The story is not show to students. During storytelling, the teacher pauses and asks questions that are purposefully irrelevant to the story. Students/listeners must then think of creative answers within a specific length of time. A SEA test is then applied to assess the effect of this new story. Results showed a significant increase in creativity among all students, especially among gifted students.

E.31 Patti Garrett Shade; Richard Shade. ***The Creative Multibilities Philosophy*** **(E.31)** Perceptions of creativity are changing as educational initiatives are being driven by global forces. Creativity is a dynamic that challenges mindsets and elevates student learning to passionate and rigorous levels of productivity. Viewing creative thinking as a concept that can be integrated into all teaching and learning processes requires a philosophy that is both meaningful and practical. In this presentation, we will explore the Mulitibilites Philosophy and the conditions conducive for supporting creative learning. The newly conceptualized Creative Multibilities Philosophy is one approach that educators may use. It begins with the work of Gardner in the Multiple Intelligences and merges with the work of Sternberg, Tomlinson,

Renzuilli and Goleman. This philosophy can also be structured as an inventory to give teachers a categorical approach to supporting the areas that contribute to the success of creative individuals. Educators are trained to seek out and assess pupils not performing well in academic areas. This focus can mask their ability to recognize and support creativity in students as the focus is diverted to improving achievement scores. In this presentation we will also introduce the Creative Attribute Learning Log to assist educators in identifying the traits and behaviors that indicate creative abilities as they are expressed in the classroom. To better understand the research basis for this approach, a profile of Csikszentmihalyi's multitude personality concept will be discussed.

E.32 Yang Yang. ***How to Provide the Optimal Education for the Gifted Students?*** **(E.32)** It is widely agreed that early recognition and servicing of high ability students is important to help them learn, and to prevent boredom and the development of negative attitudes toward school, both detrimental outcomes that can occur when students lack quality school experience. The transition from the elementary to middle school provides additional challenges to those high ability students who are accelerated to the middle school gifted program from mixed-ability elementary school classes. Does big-fish-little-pond effect exist? Does the homogeneous environment hinder or motivate their creative behaviors? How to provide the optimal education for 45 high ability students in the same class? As a researcher, an English teacher of and the class advisor for a group of first-year middle school high ability students, speaker of this session will present the research findings about the influence of acceleration on high ability students, strategies to use to nurture students' interest and creativity in learning English, and case studies in working with this special group. Implications will be discussed with suggestions for servicing high ability students in your school. Researchers and practitioners will find this session useful in building connections between research and practice in educating and managing a class of young, high ability adolescents, and generating research ideas in gifted education.

E.33 Winfred Harris Biddle. ***Help them to Nurture their Creativity*** **(E.33)** This session will discuss the findings of the author during the course of creating a course designed to assist engineering students who are struggling to apply creativity to their technical knowledge base. These students typically enter into the course as upper level university undergraduates who have spent their academic careers building a strong record in science and math courses. In order to progress in their engineering careers, however, they are required to move beyond simply acquiring technical knowledge. Often for the first time, they are required to tap into their creative powers and *apply* their knowledge in order to solve real-life problems. The presenter will discuss the challenges specific to serving this student population and the techniques implemented in order to help them to nurture their creativity.

E.34 Wieslawa Limont. ***Metaphorical Thinking in Education towards Creativity*** **(E.34)** Development of creative abilities is an important component in education towards creativity. There are many school curricula supporting the development of creative potential in students. Researchers and educators use different theoretical background as a basis for creating programmes that also include metaphor and metaphorical thinking. If metaphor is understood as a way of knowing oneself, world, and reality, it opens a new perspective, new point of view in problem-solving. In this presentation experimental studies carried out in a regular school in Poland will be presented. Experimental programmes were elaborated using metaphorical thinking, visualization, and visual expression. Received findings showed high efficacy in stimulating creative ability and imagination among pupils and students participating in experiments. Experimental education programmes and practical examples of students' works will also be presented during the presentation. All or part of these programmes are used in education at preschool, primary school, and in teacher training.

E.35 Usanee Anuruthwong ***Assessing Creativity*** **(E.35)** Creativity seems to be a simple word that everyone understands. However, when it comes to professional practice, creativity becomes one of the most difficult human abilities to define. The unclear definition impacts on nurturing, especially assessing, because creativity is explained from the different perspectives of psychological, mental, and learning processes. In addition, there are many levels of creative thinking, which range from *every day creativity* to *eminent creativity*. Many experts have attempted to develop instruments and ways to measure creativity such as the Torrance Test of Creative Thinking (TTCT), the Alpha Biological Inventory (Renzulli, 1986), the Test of Creative Thinking-Drawing Production (TCT-DP). However, there are problems in assessing creativity from the perspective of those theories that fall under six major topics: (a) attributes of creativity; (b) forms and outlets; (c) factors that stimulate it; (d) situations where it is facilitated; (e) situations that hinder it; and (f) criticisms of the instruments and processes used to measure creativity. Our research supports the findings of many recent authors of works on creativity who have hypothesized that multiple components must converge for assessing creativity. The full paper will cover specifcs on effective ways of assessing creativity.

E.36 Tan Ee Lyn June. ***Using the 5 Senses to Excite and Incite Creative Writing*** **(E.36)** Best teaching practices will be shared using the 5 senses to excite and incite creative writing. Students mainly write for functional purposes: to answer questions in the best way so as to earn the highest marks, to make their ideas clear. The idea of writing for fun and for entertainment has been lost, especially in an era where youths write in strange symbols and truncated acronyms known only in the world of cyberspace. This workshop aims to share how a group of students were led through a series of exercises that helped them unlock hitherto unknown sources of creativity.

T.7 Joan Franklin Smutny. ***Arts Alive! Creative Applications for K-5 Gifted Students*** **(T.7)** Despite their potential to enhance critical and creative thinking, the arts remain an under-used resource in the classroom. Designed for teachers in kindergarten through grade five, this workshop assists teachers in applying and adapting arts practices in a way that responds to the special needs of gifted students. Through a range of strategies, activities and materials, classroom teachers gain a practical understanding of how to use visual and performing arts processes in the curriculum to enhance imagination, invention, and higher-level thinking.

4 – CURRICULUM AND CLASSROOM PRACTICES

B.1 Jennifer Rosenberg. ***Maintaining Community in a Differentiated Classroom*** **(B.1)** How do you build and support a classroom community while addressing the unique needs of each student? This interactive presentation provides research to support creating a familial environment in the classroom, as well as tools and ideas for its implementation. It is possible to address all students' cognitive and affective needs while still maintaining a sense of community!

B.2 Jennifer Rosenberg. ***What Every Gifted Teacher Needs to Know Before Entering the Classroom*** **(B.2)** Developed from a qualitative dissertation examining teachers' experiences with asynchronous development in gifted students, this presentation will provide a background on gifted students' development and their common characteristics. This presentation will provide new and veteran teachers with a beginning knowledge base and interventions necessary to positively support gifted education learners. The works of Hollingsworth, Terrassier, Dabrowski, Vygostky, and Silverman will be represented in a manner that is accessible and beneficial to all teachers.

C.1 Wenda Sheard. ***Kinesthetic Grammar for High-Level Thinking Around the World*** **(C.1)** Grammar comes alive when students become parts of speech, stuffed animals become objects of prepositions, and words change color from one part of speech to another. Kinesthetic grammar lessons allow all gifted students, including those with learning disabilities, to succeed by using a variety of their senses. Students naturally enjoy analyzing the fundamentals of language, whether the language analyzed is English or another language. Students who are learning a second or third language enjoy sharing and comparing their mother tongue grammars for the benefit of others. High level thinking results when students discover and delve deep into debates about the structure of language. Strategies taught in this presentation include how to teach tenses, phrases, clauses, and even sentence diagramming in environments infused with critical thinking, non-verbal instruction, and cultural appreciation. Participants may choose to observe from the audience or join the presenter when she demonstrates grammar games that she and her international students have invented over the years, including The Jumping Stuffed Animal (prepositions), The Wilting Flower (participles), Sentence Murderers (conjunctive adverbs), The Lonely Only (misplaced modifiers), People Puppets (passive voice), and Noun Kickers (noun clauses). The presenter has taught English in the United States, the United Kingdom, and China. Her after-school grammar club is one of the most popular clubs among children at her school. Caution: Even the most grammar-reticent attendees might leave with a newfound love of grammar and improved writing skills.

C.2 Yaşar Barut; Murat Gökalp; Hüseyin Mertol; Hilal Mertol. ***Metaphorical Perceptions of Gifted and Talented Students with Regard to Geography Lessons*** **(C.2)** Gifted education is essential for the future of a country and mankind. To provide equal education opportunities to everyone is one of the main principles of democracy, and one of the main rights of the individual. However, equal educational opportunities are not the same as educational possibilities since gifted students have different characteristics than their peers. A differentiated curriculum is required for gifted students. Because they bring different viewpoints and desired outcomes to the curriculum, their expectations are different. Determining the perceptions of gifted students with regard to geography lessons are essential to planning a new syllabus and training material. In our country especially, there have not been any centralized syllabus programs yet for gifted students. Each teacher plans different syllabus programs with regard to

his/her lessons. This study is intended to determine the thoughts of thirty gifted and talented students between 8-14 years old studying at Samsun Science and Art School about the Geography lesson using the method of metaphor analysis. In order to determine the thoughts of the students involved in the study, they will be asked to complete the following sentences: "Geography is..... such as / similar to… because....." Content analysis will be used for analyzing and interpreting of data. The metaphors, which will be provided, will be listed alphabetically. The frequency and percentage of students' responses for each metaphor will be calculated. Metaphor images, which will have become prominent in the other phase of the study, will have been divided into five main conceptual categories. In conclusion, the gifted students will have shown what they believe with regard to the necessity and importance of geography lessons.

C.3 Kathy Ray. ***High Tech PBL: Engaging All Learners Now*** **(C.3)** Project-based learning helps students develop skills for living in a knowledge-based, highly technological society. The old model of passively learning facts and reciting them out of context is no longer sufficient to prepare students to survive in today's world and fails to engage today's learner. Solving highly complex problems requires that students have both fundamental skills (reading, writing, and math) and Digital Age skills (teamwork, problem solving, research gathering, time management, information synthesizing, utilizing high-tech tools). With this combination of skills students become directors and managers of their learning process, guided and mentored by a skilled teacher. By bringing real-life context and technology to the curriculum through a project-based learning approach, students are encouraged to become independent workers, critical thinkers, and lifelong learners. Teachers can communicate with administrators, exchange ideas with other teachers and subject-area experts, and communicate with parents, all the while breaking down invisible barriers such as isolation of the classroom, fear of embarking on an unfamiliar process, and lack of assurances of success. Project-based learning is a way of learning and working together. If students learn to take responsibility for their own learning, they form a pattern for the way they will work with others in their adult life. This presentation will provide participants ways to not only use PBL and technology with their gifted students but also to facilitate PBL with the regular education teachers to better provide for all students in the classroom.

C.4 Kimberley Chandler. ***Developing the Potential of Gifted Students from Underserved Populations: Implications of Curriculum Research for Practice*** **(C.4)** In order for the needs of gifted students from underserved populations to be addressed effectively, it is essential that curriculum interventions be designed and delivered in specific ways. The presenter will delineate key elements of research-based interventions. The session will include information regarding the efficacy of various curriculum interventions with this target population, including a review of the extant materials and their common features. The presenter will also share practical, evidence-based recommendations for spotting and developing potential. Large-scale curriculum studies focused on gifted students are limited and almost non-existent when considering the added dimension of poverty. Until the federal Javits grants in the United States provided funding to focus on scale-up curricula interventions for underrepresented populations, little empirical data on this topic were garnered through empirical studies with strong technical adequacy. Since then, curriculum units and the related efficacy studies have been published (Gavin, Casa, Adelson, Carroll, & Sheffield, 2009; Bracken, VanTassel-Baska, Brown, & Feng, 2007; Coleman, 2007; Reis, et al., 2007). Most of these studies focused primarily on students in Title I schools - those schools that are comprised of a high majority of students on free or reduced lunch and/or who may be culturally diverse learners. In many of the studies, the focus was specifically on primary-aged students and determining how to spot and develop potential. This research serves as the backdrop for the presentation and the practical recommendations.

C.5 Suzanne Plume; John Oeltjen. ***Optimal Metacognitive Practices for Exceptionally High Ability K-12 Students*** **(C.5)** How does an understanding of gifted students' brain development and their unique socio-emotional needs affect our choice of effective pedagogic strategies? How do we change our classrooms and our schools to better support the optimal maturation and growth of exceptionally high ability students so that they progress towards becoming thriving, happy, self-aware and active participants in post -industrial societies? This presentation, by a classroom practitioner, describes the successful, research-based program in an Australian independent K-12 school. Special emphasis in this presentation will be on our commitment to establishing a culture of thinking and the daily use of routines and cultural forces, which make students' thinking visible in all classrooms from kindergarten through Year 12. The principles of Positive Psychology underpin our school-wide Wellbeing program, which nurtures potential and diversity and builds resilient individuals and families who are committed to positive social action. Organizational strategies, which maximize opportunities for talent development, include a mentor program, ability peer grouping and various forms of acceleration and extension/enrichment. Attendees will be given an overview of the research undergirding our practice, examples of policies, examples of classroom activities, units of work and useful resources.

C.6 Aaron Maurer. ***Flattening Your Classroom Walls: Going Global with Coffeechug*** **(C.6)** This presentation will focus on the importance of generating a real world audience and global connections within the classroom. I will share how to get started going global and also give examples about the power of global connections by sharing my latest global project for students called Eagle Eye to the World. http://eagleeyecamera.wikispaces.com/

C.7 Christie Bruns; Ellen Honeck. ***Passion Pursuits: Exploring Passions Utilizing an Independent Research Model for Young Gifted Children*** **(C.7)** Gifted learners often have a passion for learning that entices them to deepen their knowledge of those topics. In this session, you will explore a model of independent research that works in a variety of learning environments: gifted and general classrooms, pull-out settings, and home school environments. Discover the progression of independent research from the initial research to the final presentation. As the process unfolds you will see the role of guidance by instructors and control by the learners themselves. Participants will acquire valuable organization techniques and receive copies of the model itself as well as sample independent units. So, let your passion for learning run wild and join us in this engaging session!

C.8 Christie Bruns; Ellen Honeck. ***Under the Big Top: Bringing the Worldwide Love of the Circus into Your Classroom*** **(C.8)** Circuses are known throughout the world to bring joy and awe with their daring and elaborate performances. Teaching an in-depth, engaging, integrated unit provides opportunities for young gifted learners to become entranced in the many aspects of traditional and nontraditional circuses, not just in the "ring" but behind the scenes. The magic and artistry of performance, scientific concepts, and animal and human interactions mesmerize students. Through this impactful unit, gifted learners are provided the opportunity to explore historical aspects of the circus, uncover the various styles of circuses throughout the world, as well as being introduced to controversial human and animal rights issues that surround the circus. Discover the depth and complexity of a unit focusing on "the greatest show on earth!"

C.9 Christine L. Weber; Linda Johnson; Shane Tripp. ***A Private School's Journey Towards Implementing Differentiation*** **(C.9)** This session presents a case study outlining the course undertaken by a private school that realized there was a subset of students capable of learning above the grade level curriculum, thus needing more challenging instruction. A plan with three pathways was decided upon to help teachers implement differentiation strategies in their classrooms to ensure the success of gifted and advanced students. Hendricks Day School (HDS) is an independent PK3-8th grade school in Jacksonville, Florida, USA. The school was established in 1970 and is currently a member of Florida Council of Independent Schools, Florida Kindergarten Council, Southern Association of Independent Schools, and Southern Association of Colleges and Schools. Hendricks Day School has approximately 300 students, 35 faculty members, and 25 staff members. Their mission is to provide a comprehensive and contemporary education in a moral and family supportive environment, which includes training for students in critical thinking and informed decision making, educating students for their future. An introduction to the school, an overview of its students, and faculty along with how the school got started on its journey, what is working, and what still needs to be accomplished, including identifying teacher benchmark skill sets for implementing differentiation will be provided. What has been learned about implementing differentiation strategies including specific and general issues to consider will also be shared and exemplifies this work-in-progress. Future directions and implications for other schools will be discussed. Time for question and answers will be available and helpful resources shared with participants.

C.10 Connie Phelps; Kimberley Chandler. ***Creative Professional Development of the English Language Arts for High Ability English Language Learners*** **(C.10)** Since schools hold high ability English Language Learners (ELL) to the same expectations for English Language Arts (ELA) as native speakers, gifted educators can increase their understanding of this special population and improve instructional practices through creative professional development. Professional development that begins with an awareness of how cultures value intelligence (Sternberg, 1998) creates an appropriate conceptual framework to support ELA development for high ability ELLs. Because high ability ELL students bring academic strengths and skills to the classroom, educators who acknowledge abilities of high ability ELLs enhance their learning experiences in ELA. Recommended instructional strategies of high ability ELLs include creating an environment to practice language skills, using concrete objects for vocabulary, increasing gestures and repetition, and linking content to the real world (Matthews, 2006). Creative professional development practices that implement problem-solving and critical thinking skills, address affective developmental needs, and engage the wider community of parents and professionals through mentoring constitute best practices in professional development for educators of high ability ELLs. Using academic standards such as the NAGC Pre-K-Grade 12 Gifted Programming Standards (2010) provides an infrastructure to keep instruction on track, provide accountability, and integrate essential elements

of a creatively differentiated curriculum for high ability ELLs. This session presents a philosophical and pedagogical framework to organize creative professional development practices, shares anecdotal experiences from instructional programming for diverse high ability ELL children, and suggests resources to encourage effective practices that advance development of ELA in high ability ELLs across the grade levels.

C.11 Aaron Maurer. ***Passion Driven Classroom*** **(C.11)** This presentation will focus on using the passion of your students to take their levels of learning to new heights. After working with Angelia Maiers on her Choose2Matter project centered around passions to make the world better, I have reached a whole new appreciation for the power of passion learning. The goals of this presentation is to have teachers think about how to infuse passion into their classroom and to then create a dialogue about how to do this based on the experience of the room.

C.12 Angela Doll Dworin. ***The Benefits of Classical Education for Gifted Children*** **(C.12)** Recent scholarship and educational practice have emphasized mathematics and science for gifted students. In contrast, I will discuss the many ways in which classical education provides additional and, in my opinion, superior benefits to the highly intelligent. By classical education I refer to the traditional liberal arts education which emphasizes language, particularly Greek and Latin, music, literature, history, philosophy, mathematics, and science. Classical education is optimal in its capacity to promote brain development, critical thinking, prudential judgment, and moral character.

C.13 Christine Weber; Cecelia Boswell; Wendy Behrens. ***Promoting Professionalism for Educators of the Gifted: Implementing Decision Making Strategies to Enhance Understanding of Gifted Issues*** **(C.13)** Professionalism is enhanced when members share a body of knowledge, develop skills in decision-making, and continue to evolve with experience. Professional development, which centers on learning scenarios, provides a vehicle to engage participants in the study of a variety of issues from a pedagogical and conceptual perspective and can be an effective tool to enhance understanding. Best practice supports that *teachers who sharpen the knowledge, skills, and attitudes of their craft lead students to greater success.* In Burkman's (2012) study, novice teachers ranked interactive and cooperative learning as a method of presentation that would be most meaningful or appealing for professional development. Thus, we need to take into consideration how to provide the best training and instruction for educators and stakeholders working with gifted and talented students. This session concentrates on decision making strategies which are often taught to our gifted students and can be useful when analyzing critical issues related to professional development. Participants will explore various decision making strategies, such as the Six Ws, hexagonal radial, and the decision wheel, which will enhance their study of learning scenarios to support professional development. These learning scenarios encourage a detailed analysis and critical reflection of the most current and prevalent issues in gifted education that align with the *2010 National Association of Gifted Children Programming Standards* (NAGC) developed in the U.S.

C.14 Denise Zigler. ***NASA Astrobiology – DNA of Strawberries for Gifted Learners*** **(C.14)** Through this session, teachers/learners will increase their understanding of and comfort with the nature of science and the scientific process through the context of interesting real-world scientific investigation. The primary learning outcomes: (i) The learner will be able to increase their understanding of and comfort with the nature of science and the scientific process through the context of interesting real-world scientific investigation; (ii) The learner will review the question, what properties do living things have that non-living things do not; (iii) The learner will learn the simple method to extract DNA and why each step is necessary due to the complex organization of DNA in cells; and (iv) The learner will examine NASA teacher websites. The presenter will share with teachers a power-point lesson/hand-out on the DNA of Strawberries and a lesson plan that can be used in teaching gifted learners, describing the step-by-step process of the extraction of DNA of strawberries. Following the power-point demonstration, the presenter will share some background information on the DNA of strawberries: The teachers will analyze why it is important for scientists to extract DNA from organisms, as they analyze the nature of the relationships between structures and functions in living cells. The presenter will actively engage teachers in the process of extracting and examining the DNA of strawberries. Following the extraction of DNA of Strawberries lesson, the presenter will focus upon and share key NASA websites for teachers.

C.15 Denise Zigler. ***Reach for the Stars*** **(C.15)** The primary learning outcomes: (i) The learner will be able to increase their understanding of and comfort with the nature of science through the context of an interesting real-world scientific lesson; (ii) The learner will analyze constellations and "the stages in the lifecycle of a star"; (iii) The learner will chart and graph constellations and create/name their own star; and (iv) The learner will examine NASA teacher websites. This is an ideal real-world scientific lesson designed to engage gifted learners. The presenter will use a power-point

presentation to share constellations, "the stages in the lifecycle of a star" and the procedure for learners to chart/graph constellations. Following the power-point demonstration, learners will analyze, chart and graph constellations and graph constellations. The learners will create/name their own star. This session seeks: (a) For participants to use the materials/ideas provided in this session to differentiate and use with gifted students. Teachers will exam NASA websites to use in their classroom; and (b) To analyze, chart and graph constellations through a hands-on lesson for teacher involvement-Reach for the Stars, in which teachers can implement into their curriculum and use with diverse gifted learners. The content in this session consist of teacher participation in hands-on activities, visual demonstrations, and a power-point demonstration. Handouts will include the power-point presentation and the Reach for the Stars materials.

C.16 Kimberley Chandler; Jennifer H. Robins. ***High-Quality Professional Development in Gifted Education: Crucial Components for Training*** **(C.16)** One of the key roles of a gifted program administrator should be providing ongoing professional development for classroom teachers, gifted program specialists, principals, and other relevant practitioners. In this session, participants will explore the intersection of professional standards, best practices for working with educators on topics related to gifted education, and a model of teacher change as they relate to professional development for teachers of the gifted. A key question becomes, "How can we facilitate capacity building among professional developers who regularly interface with and provide professional development experiences for teachers of the gifted?" One way to facilitate this capacity building among local professional developers is by providing the necessary tools for standards-based, needs-driven professional development offerings (Dettmer, Landrum, & Miller, 2006; Kitano, 2008). This session seeks to assist professional developers in gifted education in: (1) identifying professional development needs at the individual, school, and district levels; (2) selecting appropriate professional development delivery strategies, models, and options; and (3) creating targeted and meaningful professional development plans. Participants will leave this session with an improved understanding on how to create and implement standards-driven, needs-based professional development.

C.17 Jana Kirchner. ***Preparing Teachers to Use an Inquiry Model with Gifted Social Studies Students*** **(C.17)** One of the challenges for social studies teachers is how to avoid making the study of history, geography, and government simply a collection of names, places, and dates to be memorized. The new framework for social studies standards in the United States focuses on the need to teach using inquiry skills, i.e. reading, writing, and thinking in the discipline. This focus on critical thinking with challenging content and sources is important for gifted students, but often teachers do not have the resources or time to figure out how to teach in this way. This session will showcase the new national framework for social studies standards and an inquiry model for teaching social studies content to students at all grade levels. The presenter has implemented this inquiry model in professional development sessions with practicing elementary, middle, and high school teachers. Lessons learned from those experiences will be shared as well as plans to implement the inquiry model of teaching in a new university-level teacher preparation program during the next school year. Copies of an inquiry lesson template will be shared with participants. Time will be allowed for a question and answer session at the end.

C.18 Jennifer Rosenberg. ***Differentiated Reading Classrooms at All Grade Levels: Teaching in Small Groups*** **(C.18)** This session will provide a hands-on presentation focused on bringing small group teaching into the reading classroom. This method of differentiation has been proven successful in multiple outlets and provides the teacher with the opportunity for more individualized instruction, a key component of differentiation. Participants will walk away with tools for classroom management and developing their own small group instruction for reading.

C.19 Joan Jacobs; Sue Harvey. ***Beyond the Test: Developing Thoughtful Questions to Create Critical Thinkers*** **(C.19)** Historically, questioning has been a skill of the educated class, a characteristic of creative individuals, and a way of life for toddlers. Students deserve to learn the skill of questioning, not just for a test, but also for continued thinking about the content well into the future. Questioning has unfortunately morphed into a test prep activity, focused on one right answer. Since the passing of No Child Left Behind, questioning has morphed into a test prep activity, focused on one right answer of four limited options. Teachers often become fast-talking game show hosts, speeding their way through the isolated bits of knowledge needed for the test. Developing better questioning skills as a teaching strategy results in heightened motivation, increased participation, and deepening of critical and creative thinking skills, yet frequently textbooks demonstrate poor questioning techniques. Likewise, the Socratic questioning method of using questions to challenge assumptions, expose contradictions, and develop conclusions is a powerful teaching approach. Posing questions during lessons is more effective in producing achievement than instruction without questions (Cotton, 2002),

and oral questions are far more effective than written questions. It is the quality, not the quantity, of questions that matter in student achievement (Cotton, 2002). Presenters will engage participants with multiple styles of questions, the process of developing thoughtful questions designed to elicit deep thinking, and the ability to personalize the approach for their own classrooms. This focus on depth and complexity of ideas will enable participants to foster heightened engagement in their classrooms.

C.20 Josef Trna; Jana Skrabankova. ***Excursion to CERN as an Efficient Intrinsic Motivation for Students Gifted in Science*** **(C.20)** Motivation is an important factor in the development of gifted students. There are many motivational methods that are based on the intrinsic motivation of students. One of these methods is the motivational excursion to research centers. The objective of our study is inclusion of excursion as teaching method into the analytical-synthetic model called "Analytical-synthetic model of teacher creativity in connection to the selection of teaching methods for gifted students." Excursion as traditional teaching method has an innovative effect on the motivation of gifted students in science. The incentive effect of the excursion may be amplified by selecting an appropriate scientific center and its link with the educational content. The parts of modern physics such as astrophysics and nuclear physics, which explore such phenomena as the creation of the universe, may be considered as a highly motivating content. An example of such appropriate research center suitable for the excursion is CERN in Switzerland. In years 2010-2012 we repeatedly carried out the excursion to CERN with groups of students (aged 16-18) gifted for physics. Gifted students are offered a unique opportunity to get above-standard information in an interdisciplinary science in the top intellectual and scientific environment. We used students' questionnaire to investigate the motivational efficiency of excursions to CERN. The questionnaire results are included in our study. Key words: development of giftedness, creative teacher, educational methods, excursion, motivation, science education.

C.21 AU YEUNG Yau Wai; Janet, CHAN Wai Yin; Maria, CHEUNG Suk Ming; Teresa. ***Infusion of Gifted Education Elements in Everyday English and Chinese Language Classrooms in Hong Kong*** **(C.21)**The Education Bureau of Hong Kong advocates the belief that gifted education is part of quality education. Therefore, gifted education elements should be made accessible to all. In this presentation, three school cases covering experiences in Key Stages 1-3 (6-15 year olds) in everyday (Tier 1) English and Chinese Language classrooms will be used to illustrate how Gifted Education elements were infused to unlock students' potential which may not be easily noticed in some conventional language classrooms. (1) A Key Stage 3 example illustrates how students' creativity was stretched through an English story-writing task. The Theory of Multiple Intelligences and Bloom's Taxonomy were jointly used to design tasks that help students appreciate classic Chinese and Western stories, music and cultures. Students then picked their favourite songs and created stories that resonate with the songs chosen; (2) A Key Stage 2 example illustrates how creativity and higher-order thinking, problem-solving skills in particular, were infused in an English pre-writing task to prepare students for journal writing. Students applied ideas gained from reading texts about fossil studies and knowledge in other disciplines creatively to brainstorm ways to investigate a mystery case; and (3) A Key Stage 1 example illustrates how creativity and affective elements, e.g. personal and social competence, were promoted through effective questioning, a flexible selection of teaching materials from different key stages and an in-depth appreciation of Chinese texts. (English annotations will be added to the texts and student work).

C.23 Brian Lux. ***Expanding Their Pond: Benefits of Primary School Exposure to Advanced Content, Vertical Peer Groups, and Research Professionals in STEM (Science, Technology, Engineering and Math) Fields*** **(C.23)** Building upon ideas of exceptionality with transitional youth this author first presented at a PACIFIC RIM exceptionality conference, identified gifted students (n=80) from two socioeconomically disadvantaged (Title 1) schools in America were given access to resources typically not found in elementary gifted education. Using a layered framework, including older, but intellectual age mates, collaborative multi-school and multi-age field excursions, college laboratory experiences, National Science Foundation funded projects and speakers from the National Institutes of Health, Teva Pharmaceuticals and two universities, seven to ten year old gifted students were immersed in a comprehensive program designed to "expand their pond." These experiences provided them with research and professional level perspectives during their early formative science education. Students were given direct access to an "Ask a STEM professional" dialogue where experts in academic, research and industry answered student questions via written and electronic communication. Using ongoing data collection throughout, stakeholders were empowered to provide programmatic feedback using several assessments. Overwhelmingly, stakeholders found substantial value in both the methodology and the student outcomes. Specifically, students spent more time in a realistic zone of proximal development and engaged in higher order thinking skills at the apex of Bloom's taxonomy. Students asked more critical thinking questions, verbalized ideas above basic

curricular expectations and engaged as active participants in a vertically articulated learning process. This was most notable when gifted students were working collaboratively with intellectual equals several years or decades older.

C.24 Lynette Breedlove; Alene Lindley. ***Pooling Resources for Teacher Training in Gifted Education*** **(C.24)** In the Greater Houston Area, more than 30 school districts and private schools pool their resources to provide training to teachers of the gifted. Last year, highly qualified experts in gifted education trained more than 5000 teachers for approximately $10 a teacher! In the state of Texas, teachers of the gifted are required to complete 30 hours of professional development in gifted education before teaching identified gifted and talented students. Every year thereafter, teachers of the gifted are required to complete six hours of update training. This is usually completed through a variety of sources including state regional service centers, university programs, private consultants, and school district conducted training. The training is costly and highly variable across sources. The Houston Area Cooperative on the Gifted and Talented provides both solid foundational training for beginning teachers of the gifted, as well as a variety of annual update trainings. For experienced teachers, finding meaningful annual updates is difficult. Gaining access to different presenters and different topics through a single school district or regional service center is expensive. However, with several school districts working together, numerous updates can be scheduled each year by a variety of presenters. This presentation will review the practical logistics of creating a robust cooperative for professional development. We will share the details of how our cooperative works, the documents we have created over time, and help you think about ways to set up a similar cooperative in your area.

C.25 Mandy Yau Tai Tsang. ***How Teachers Networks Made a Difference in Curriculum Development and Classroom Practices for the Gifted – the Hong Kong Experience*** **(C.25)** One of the biggest challenges to teachers in delivering effective curriculum and classroom practices is to how they turn the implicit learning into explicit demonstration of their belief, knowledge, and experience in catering for learner diversity. In Hong Kong, gifted education is implemented through a school-based approach. Practice-oriented professional development (PD) in gifted education plays an essential role in strengthening in-service teachers' experience in classroom teaching and curriculum leadership for capitalizing students' potential despite varied school contexts. In order to prepare teachers for pursuing practical understanding of how to meet gifted students' needs in regular classroom, pull-out programmes and through off-site support, Gifted Education Teachers Networks (GETN) has been launched by the Education Bureau, Hong Kong since 2008. The GETN is a milestone and also a professional exchange platform following a series of programmes under a new PD Framework. These networks have been created to enhance teachers' practical learning through teaching units re-modelling, lesson observation, experience exchange in school clusters, and consultancy visits by overseas trainers. "I hear and I forget. I see and I remember. I do and I understand". The GETN adopts the essence of Kolb's learning theory that highlighted the connection between active experimentation and reflective observation as well as that between concrete experience and abstract conceptualization. In this session, the three-tier operation mode adopted in Hong Kong will be explained with examples indifferent school contexts and emphasis. There will be discussion in varied ways of linking GE provisions of the3 tiers. Good pedagogical practices of core GE elements in learning, higher-order thinking skills, creativity and personal-social competence will be shared. In parallel, how teachers' classroom practices evolved and sustained through their participation in the GETN will also be discussed.

C.26 Mary St George. ***Building a Culture of Meaningful Reflection Among Self Directed Learners who are Gifted*** **(C.26)** Loosely structured, open ended learning tasks are well suited to the learning needs of many gifted students. Such tasks enable these students to personalize the depth and breadth of the challenge they face in their learning. However, the more independence and choice we offer to our students, the harder it is to create a means of reviewing work which genuinely values the diverse learning intentions which these students may shape for themselves. A robust system of learner reflections, scaffolded by supportive discussions with the teacher, is an approach which can contribute meaningfully to formative assessment. Mary will discuss the systems of reflection she has developed for gifted learners of primary and middle school ages in her online and face-to-face classes.

C.27 Matthew Edinger. ***Teachers of the Gifted and their Pedagogical Choices: What Choices are Being Made?*** **(C.27)** Pedagogical resources chosen by teachers of identified gifted students are crucial to high student achievement and academic success (Eggen & Kauchak, 2006; Wenglinsky, 2000). However, many teachers of gifted students are purported to rely on the 'fads' of the gifted educational field, presented through workshops and conferences, instead of research-based best practices that are supported by rigorous empirical evidence (Ambrose et al., 2010; Renzulli, 2012). Using a mixed methods study of 270 gifted teachers from four regions of the United States, I hope to contribute to the literature on gifted education, teacher of gifted student pedagogy and social networks in three important ways. First,

by examining the relationship between two-mode teacher and resource networks, I found what many teachers of gifted students do, when developing their pedagogy, rely upon information propagated through educational conferences and workshops rather than the journal articles, books and university classrooms that disseminate gifted education's research-based best practices. Secondly, I found that demographic attributes such as years of teaching and levels of education are directly associated with the sources teachers select to find gifted education practices. Finally, similar to the hypotheses of critics in the field of gifted education, the data analysis suggests that the strategies chosen and used by teachers of gifted students who attend educational conferences and workshops are more likely to be ill-supported teaching 'fads' rather than well-researched teaching practice. The results of this study also offer significant implications for school administrators and practitioners within the field of gifted education.

C.28 Michael Clay Thompson. ***Advanced Vocabulary: Direct Study through Latin and Greek Stems*** **(C.28)** If children are to prosper in the advanced academic work that their future potentially holds for them, they must have a grounding in the academic vocabulary that is so absent in the regular world and so dominant in the academic world. This means, especially, that children must know the Latin and Greek prefixes and roots that form the foundation of the English language. This session will present strategies based on Latin and Greek stems as used in English vocabulary. The Common Core state standards expressly expect the use of Latin and Greek affixes in the development of vocabulary for college and career readiness.

C.29 Michael Clay Thompson. ***Four-Level Literature for Gifted Children: A Differentiated Strategy*** **(C.29)** A strong literature program not only exposes students to literature in itself, it also reinforces vocabulary, grammar, and writing instruction. It is one of the reasons that those elements are taught. Literature curricula for gifted children often fall short however, because the texts are of insufficient quality and quantity. Furthermore, novels are often taught as isolated units, unconnected with other titles, and the evaluation methods applied to the literature are often convergent, focusing on right answers to tedious and conventional questions. This presentation will provide a strategy for cumulative literature, with a wide range of high-level evaluation. Participants in this presentation will receive a differentiated strategy for presenting literature to gifted children. They will learn methods for teaching cumulatively and for emphasizing exciting Socratic essay questions that identify common themes and similar characters, taking literature to a higher order of thinking than simple novels in isolation can do.

C.30 Michael Clay Thompson. ***Introduction to Four-Level Grammar Analysis*** **(C.30)** Four-level analysis gives teachers a practical way to compact grammar instruction and launch it early in the year, so that grammar can be used throughout the year as a way of thinking about language, resulting in more effective writing and vocabulary usage. Participants will leave the workshop with an understanding of how four-level analysis gives students a clear, understandable approach to grammar that makes real application possible.

D.7 Tracy Inman; Brittany Crowley. ***The Effects of Problem-Based Learning in Math and Science on High Potential Elementary School Students*** **(D.7)** A clear need exists to develop talent among advanced learners at an early age especially those from low-income backgrounds and underrepresented minorities. The Jack Kent Cooke report *achievement rap* (2007) explains that talents of high-achieving students from lower-income families are "under-nurtured" in schools, resulting in the virtual disappearance of many of these students by high school. A need also exists to provide opportunities to increase interest in science/math and in careers in STEM. *The Nation's Report Card* (2009) reveals that less than a fourth of seniors in the United States are proficient in math and science. Being able to identify students with high levels of interest in math and science allows educators to provide advanced instruction to them, ultimately resulting in higher achievement. Stemming from data gathered in the Javits-funded Project GEMS (Gifted Education in Math and Science), this presentation explores the results of a two-year study examining the effects of problem-based learning (PBL) on growth in math achievement and science process skills in high ability or high potential elementary students, particularly those from low-socioeconomic backgrounds. Students belonged to one of three treatment groups including ability-grouped target classes and a one-day-a-week magnet program. This session outlines the goals, design, methods, and results of the study. Of particular relevance is the impact of PBL in various grouping situations and with students from low SES.

D.8 Tracy Inman; Julia Roberts. ***DAP Tool: A Protocol for Developing and Assessing Products*** **(D.8)** Authentic assessment and authentic products are paramount in preparing globally competitive learners. Although educators want to offer choice to motivate students and wish to differentiate learning experiences using products, they too often lack the time

to create quality rubrics that hold students to high standards. Rubric creation proves difficult especially if those rubrics assess learning of content at complex levels, expect product components to meet real-world criteria, evaluate creativity, and look for student reflection on the learning. A protocol is the answer. The Developing and Assessing Product (DAP) Tool guides students in product development and facilitates differentiation, simplifies assessment, and removes the learning ceiling. This session explores four innovations to product assessment; through discussion and samples, participants will be able to describe common components of all products and explain the need to differentiate when assessing product. (1) Each DAP Tool – regardless of product – has these same components: content (how students demonstrate learning); presentation (elements particular to specific products); creativity (originality put into content and product); and reflection (metacognition). Consistent language and expectations simplify the process; (2) DAP Tools guide students in developing products by specifying key elements and setting targets so students know the essential steps in learning (i.e., content, presentation of that content, creativity, and reflection); (3) DAP Tools' levels vary from traditional scales, successfully removing the learning ceiling. Levels beyond proficiency show possibilities for excellence; and (4) Each DAP Tool has three levels of sophistication, so it can be used across grade levels and abilities to differentiate assignments.

D.9 Vella Goebel; Gia Berridge. ***Accelerated Reader: Challenging Gifted Children in the "Regular" Classroom*** **(D.9)** The Accelerated Reader program is widely used in schools in the U.S. and other English-speaking countries, and numerous studies either support or dispute its use. Few are neutral on the subject of AR's use. Our own research reveals that its effect on students' reading habits may be a negative one in the long run, as revealed by surveys of college students. This study relied on dual research methods for data: an attitude survey of university teacher education undergraduates who had participated in Accelerated Reader (AR) in their own K-12 experiences and a case study of a high-ability kindergarten (age 5 to 6) student. The authors found that, in general, the college students disliked having used AR, and many felt that the program had actually resulted in long-term damage to their motivation to read. However, the authors found that Accelerated Reader served to motivate a kindergartner who had previously been recalcitrant about reading assigned books in class. The researchers conclude that AR may be a useful motivator and a viable means of differentiation for high ability students in schools where little or no gifted programming is available.

D.10 Victor Mueller-Oppliger. ***Learning Arrangements to Promote «Technologies of the Self», Self-Regulation and Sense of Responsibility in Gifted Education*** **(D.10)** Gifted students need to recognize their above-average potentials, to be motivated for personal efforts, and to find sense in using their capabilities. In addition to their self-will they have to develop strategies to translate their abilities into high achievement. Apart from these learning aspects they notice "to march to the beat of a different drummer" within their social and learning surroundings. Students can develop those competencies in "learning architectures" which will evoke self-directed and self-reflective learning. Within these arrangements they construct their individual comprehensions and horizons of meaning. They develop subject-specific personal learning strategies but also their self-concept, including "technologies of the self," learning attitudes, volition and other co-cognitive traits. Core activities in these learning-environments are learning dialogues: within the learning-community to relate personal understanding to others; but also within a professionalized learning counseling provided by teachers that fosters self-reflection, self-realization and shared responsibility for the learning community. The presentation introduces a concept of self-directed and self-carrying learning that will enable gifted students to learn in their individual zone of proximal development. The learning architectures have been developed in collaboration with classroom teachers and educationalists. The learning-activities of the students and the actions of the teachers were recorded using full-view and head-mounted cameras. This allowed an in-depth exploration of micro-learning processes in which students interact with the learning support and interventions provided by their teachers. The research is focused on learning processes but also on changes in the comprehension of personalized learning and on the convictions and teaching behaviors of the teachers.

D.11 Sue Harvey; Joan Jacobs. ***Miss Brooks Loves Books—And So Do I: Increasing Enjoyment in Reading among Talented Readers*** **(D.11)** Students with the most positive attitudes toward reading will have the highest reading achievement, so the willingness to read during spare time is paramount, yet both average and talented readers dislike being forced to read materials that they have not chosen. That can be distressing to watch because it portends more difficulty in school and adulthood. Classroom practices may prevent students from enjoying literature. They may resist, not because they dislike reading itself, but because they averse to the dreaded follow-up assignment (Write a summary..."). Many dislike reading because a lack of curricular flexibility has kept them from encountering the book that will light a fire. We know that students with the most positive attitudes toward reading will have the highest reading achievement (IRA, 2003) so the willingness to read during spare time is paramount. Participants will consider the importance of developing student

interest in reading, providing cognitive and creative challenges with the literature, identifying students' attitudes and interests when implementing reading programs, and providing challenging material in Vygotsky's Zone of Proximal Development when selecting reading materials. Presenters will discuss the importance of choice and a literature-friendly classroom (Jacobs, 2004). This presentation will focus on specific research-based strategies and titles that will help kids learn a love of reading at an early age and sustain that into adulthood while still increasing fluency and comprehension.

D.12 Susen Smith. ***Teachers' Voices on Best Practice in Differentiating Literacy Teaching and Learning for Talented Primary School Students*** **(D.12)** The research literature suggests that very little differentiated pedagogy is occurring in primary classrooms today and much less occurs to support the needs of gifted students. There are still conflicting reading outcomes for gifted students as a result of current instructional approaches and without a challenging and differentiated curriculum, gifted readers cannot achieve to their reading potential. Effective differentiated instruction does support the development of more productive learning outcomes for gifted students. Teachers can voice their views on effective strategies to differentiate reading instruction for gifted students. While there is much research on teacher perspectives, there is very little research on their views of differentiating curriculum and pedagogy for advanced readers in Australia. Researchers have identified gaps in the knowledge base associated with differentiating teaching, and learning for gifted students and the need for teacher professional learning. Thus, this research project will attempt to address these research gaps. This mixed-methods study used questionnaires and interviews to collect data and examine the relationships between perspectives of teachers towards differentiating instruction for gifted students, concerns about differentiating teaching and learning for diverse student needs and professional learning about differentiation. Teachers believed that they differentiated reading instruction for gifted students, using a variety of instructional approaches, such reciprocal teaching, providing free choice, contracts, higher level thinking tasks within like-ability grouping and more challenging reading materials for independent learning. However, some concerns were also raised about curriculum differentiation.

D.13 Deb Clark. ***By Choice not by Chance – A Recipe for Success*** **(D.13)** Giftedness is multi-dimensional and can develop throughout a child's education. These extraordinary children are best supported in an environment that recognises they have different and diverse learning needs and that multiple strategies must be employed to enable the development and actualization of gifts and talents. *Gifted Kids* is a charitable trust that has operated in New Zealand for over 12 years. The Trust has developed an innovative affirmative based curriculum that has been successfully delivered to more than 3000, 5-13 year olds through supporting their intellectual, creative and affective needs. Receiving appropriate learning opportunities should be the choice of every gifted child and not left up to chance. This talk helps teachers to ensure effective learning opportunities are taking place through covering the essential needs of gifted students and introducing a range of best practice strategies and tools. It uses the *Gifted Kids* curriculum as its background and is supported by the experiences and examples of present and past children's learning and reflections.

D.14 Dieter Hausamann. ***School Student Research Projects – Opportunities for Stem Talent Support*** **(D.14)** Based on a pronounced lack of engineers and scientists in Europe, some 300 extracurricular education facilities have been established in the past decade. The majority of these facilities are so-called "school labs", their mission being to increase the awareness for STEM and correspondingly, to attract young people to these faculties. Several of these school labs focus on STEM talent support, offering special enrichment programs and projects to gifted and motivated students. The DLR School Lab Oberpfaffenhofen operated by Germany's national research center for aeronautics and space, DLR, is a typical example of such a school lab devoted to both objectives of broad education and focused MINT talent support. The lab's expertise is based on visits of approximately 20,000 secondary school students and about 50 enrichment projects. This contribution addresses a special type of enrichment projects, in which the participating school students execute long-term and complex research activities. To date, the DLR School Lab has initiated eight such projects with groups of highly talented secondary school students. Whereas primarily the projects comprised subjects with established solutions (e.g. the influence of Einstein's theory of relativity on satellite navigation systems), the later ones addressed new questions with unknown solutions: The projects "Remotely Controlled Roboting" and "Acoustical Satellite Navigation Simulator," described in this contribution, required research efforts at university level and resulted in completely new technical developments. Furthermore, the complex scientific content of the projects initiated new working strategies for the students as well as for the supervisors, especially an extremely high self-organization within the school student team.

D.15 Fatma Can Agaoglu. ***Language Awareness of the Turkish Gifted Students*** **(D.15)** How do the Turkish gifted students respond to world languages? Do they recognize some borrowed words in English? Do they recognize world languages in their different writing systems? Do they grasp linguistic rules? This study aims to present an adapted version of a

language awareness test and an evaluation of the results taken from it in the light of the Turkish gifted student's profile. The test is composed of eight questions about languages, some of which are formed by means of English; since it is the mainstream foreign language taught in the Turkish schools. Test takers are 9-12 years old Turkish gifted students (119 students in total) who enrolled in differentiated foreign language classes. They took the test as a summative one; both for checking the objectives and catching clues of a linguistic sensitivity. Aims of the differentiated foreign language classes are to introduce the Turkish gifted students with world languages, linguistics as a scientific branch, affixation and translation rules, social and scientific dimensions of languages. Evaluation of test results offers an outline of the cultural and linguistic awareness of the target group which relates to their potential gifts and talents.

D.16 Hua Chen. ***Design and Implementation of Affective Curriculum for Gifted Students in RDFZ*** **(D.16)** The High School Affiliated to Renmin University of China (RDFZ) has been using the *Collaboratively Building the Growth Path* curriculum, adopted from the secondary education system in Hong Kong area since September of 2012. After tailoring it to what is now called *Growth,* we have been offering the course for gifted students in our school. On the basis of positive psychology, this course incorporates eight themes, including mentorship and friendship, emotion control and expression, learning ability, self-efficacy, resilience, life interpretation, self-recognition, goal orientation and decision. This course takes the forms of teacher facilitated group discussion, presentation, and after-class reflection to improve students' resilience, cognition, and intrapersonal abilities. It has had some positive effects. This session will focus on the introduction to the course and the effects of affective curriculum in improving gifted students' mental health.

D.17 Katrina Eddles-Hirsch. ***A Phenomenological Study of Advanced Learners Placed in Educational Settings Suited to their Academic Needs*** **(D.17)** This study explored the lifeworld of 27 academically advanced primary students in educational environments that have attempted to address their atypical learning needs. A phenomenological theoretical framework was used to discover the experiences of 13 gifted boys and 14 gifted girls attending either single-gender or co-educational schools. Three types of school settings were purposefully selected for this study to discover the supportive systems that these different educational environments created for academically advanced learners. While there is a great deal of research about the cognitive outcomes of these types of school environments, little is known about their social and emotional outcomes. Some researchers, as well as educators in the field, have suggested that the affective outcomes of these types of school settings may be a more powerful argument for gifted programming than their well-known cognitive results (Coleman, 2005). The results from this study demonstrate that, while challenging instruction was clearly important for the emotional wellbeing of the advanced learners, it went hand in hand with the schools' ethos in relation to the social and emotional development of their student populations. The schools' objectives clearly influenced students' perceptions of emotional safety, acceptance of diversity, and teacher student and peer relations in the schools' environments. This finding differs from previous research that suggests that if a gifted child's cognitive abilities are catered for, her or his social and emotional needs will automatically be met.

D.18 Ketty Sarouphim. ***Establishing Programs for Gifted Learners in Lebanon Curriculum and Classroom Practices*** **(D.18)** In Lebanon, programs for the gifted are practically non-existent. In an attempt to bring gifted education to the country, the author conducted two studies to investigate the efficacy of using DISCOVER, a performance-based assessment in identifying gifted Lebanese students. DISCOVER stands for *D*iscovering *I*ntellectual *S*trength and *C*apabilities while *O*bserving *V*aried *E*thnic *R*esponses. The rationale was that to launch gifted education in the country, educators need a valid and reliable instrument for identification purposes. The first study was a pilot conducted in one private school on a sample of 49 fifth graders. All were given DISCOVER at the beginning of the school year. The results showed that students identified as gifted had a GPA ranging between 3.70 and 4.00, thus indicating an alignment between students' DISCOVER ratings and their school grades. Teachers' interviews also corroborated the results. In the second study, 248 students in grades 3-5 were given DISCOVER and the Raven Progressive Matrices. The results showed a good fit between students' non-verbal DISCOVER ratings and their Raven scores, suggesting high concurrent validity. Most students nominated by teachers and parents were also identified as gifted through DISCOVER. The results of these two studies support the use of DISCOVER in Lebanon. The second step was to design a model that consists of three phases, preparation, implementation, and evaluation to establish gifted education in the country. Each phase consists of several steps delineated in the paper. Research on DISCOVER as well as the proposed model indicate that the time is ripe for recognizing and nurturing the talent of gifted learners in Lebanon.

D.19 Kimberly E. Koehler Freitag. ***Challenging Gifted and Talented Secondary School Students Using a Cognitive Apprenticeship*** **(D.19)** This presentation is focused on a research study that examined curriculum and instruction

designed to challenge gifted and talented high school students in the social studies subject, history. Study results supported the use of domain-based expertise as a viable framework for designing curricula to challenge gifted and talented high school learners. The study affirmed the efficacy of the cognitive apprenticeship instructional model as a vehicle for developing expert-like performance in students. The study also highlighted the Innovation Configuration Map as a method for measuring fidelity of treatment implementation and mitigating threats to validity in research studies. The presentation will highlight the study components and provide student work samples and practical suggestions for classroom teachers, administrators, and gifted program coordinators.

D.20 Kyungbin Park; Jaeho Lee; Miran Chun; Jiyoung Ryu. ***Redirecting Gifted Science Education in Korea: Analysis of Gifted Science High School Graduates*** **(D.20)** Specialized education for scientifically gifted children began in the Republic of Korea in 1983 after the establishment of the first science high school. From that point forward, science high schools have been established for each city and province. In 2003, the first gifted high school exclusively for gifted students (Korea Science Academy) was announced, and presently, six Science Academies and two Arts and Science Academies are in (or are soon set to be in) operation. In addition to science high schools, the Korea government has supported science gifted education by funding a total of 30 science gifted education centers affiliated with universities since 1998. This research accumulated data from graduates of science high schools, who now are well recognized by society as successful scientists. For the study, we obtained a list of eminent graduates from each science high schools, and from that pool, interviewed those who agreed to be interviewed. The interview questions asked what characteristics of school life motivated these students to achieve, such as education, major, family and social relationships, leisure time, and success factors. From the interviews, we then extracted and analyzed main contents and keywords. The main goal of the research was to analyze education factors to understand the direction we must take to further improve science gifted education.

D.21 Sule Demirel Gurbuz. ***Reasons of Gifted Students' Interest*** **(D.21)** The purpose of this study is is to review EPTS gifted students' interests in social and academic topics. Gifted students focus on their specific interest but they may have problems with time management. According to results of a study, although the EPTS students were quite socially active, they had difficulties with time management (Vuran, Demirel and Opengin, 2012). Therefore, this study was conducted in order to investigate how long and why they take time off for these kinds of activities. Sixth, seventh and eighth grade students who had attended the EPTS filled an open-ended form about their academic, social, and other activities, and time management among these activities in 2013. They answered whether they participate some academic courses, special institutions for gifted and talented students, social clubs or not, and they explained their purpose of participate to these kinds of activities. Their time management was evaluated with respect to the data that was collected. Induction analysis was used for data analysis. The results of this study indicate that the reasons they take time off are academic advancement and gifted friendship.

D.22 Lynda Garrett; Rubie-Davies, C.M.; Flint, A.; Watson, P.; McDonald, L. ***Reading between the Lines: Comparisons between Teacher Expectations for Young Gifted and Non-Gifted Readers, and Student Self-Perceptions*** **(D.22)** The seminal work of Rosenthal and Jacobsen (1968) into the relationship between teacher expectations and student outcomes spawned multiple publications. Several student characteristics, for example, ethnicity, social class, gender and diagnostic labeling have been found to influence teacher expectations. However, there has been limited focus on researching teacher expectations of gifted students. We explored whether teachers' expectations for student achievement in reading differed, depending on ability. We also investigated and compared self-concept and motivation of young gifted and non-gifted readers. The participants were 301 Year 3-8 gifted students (reading two or more years above their chronological age), 1432 non-gifted Year 3-8 students, and their 89 teachers. Teachers provided their expectations for all students' achievement in reading for the coming year; standardized reading data were collected and students completed a questionnaire related to their self-beliefs. There was a statistically significant difference between teachers' expectations for gifted and non-gifted readers; teachers believed gifted students would progress more quickly than non-gifted students over the ensuing year. Young gifted readers were more positive than non-gifted in their reading and overall academic self-concept; they reported higher levels of competence in reading, greater self-efficacy, viewed reading as intrinsically worthwhile, and being of value in life. Non-gifted readers viewed ability as more important for achievement than effort when compared with their gifted peers. This paper will consider the implications of these findings for teacher practice and gifted and non-gifted students' opportunities for learning, within the regular classroom.

D.23 Prodipta Hore. ***Challenges in teaching Mathematics to Middle and High School Students*** **(D.23)** Today's mathematics teachers in India are experiencing major changes not only in the mathematics content they teach, but also in the way

they teach. Nearly all of these teachers came through school when mathematics teaching consisted of training a relatively homogeneous group of students through lectures to memorize and master a collection of facts. Now teachers are called on to teach new, more challenging mathematics to a very diverse audience using active learning approaches designed to develop understanding. This is an enormous challenge. To meet this challenge, mathematics teachers need the support and encouragement of school leaders at all levels. In India there is a growing awareness of the global importance of the basic idea of gifted education, and many educators realize that gifted students frequently show advanced development in problem solving capability relative to their age peers. These students often learn more quickly, exhibit a higher quality of thinking, and have the capacity for remarkably high standards of performance compared to their fellow students in the same classroom. However, these characteristics are not always evident in the classroom setting and underachievement is a pattern seen in a number of gifted students. A particular challenge for middle school teachers, therefore, is to learn to differentiate or adapt instruction to respond to the diverse student needs found in inclusive, mixed-ability classrooms.

D.24 Raphael F. Iluyomade; Singh Jai. ***Fostering Students' Learning and Development through Research Based Projects: Reflection on Raffles Institution's Year 1 Students*** **(D.24)** Using responses to Research Education (RE) questionnaires and teachers' observation of Raffles Institution (RI) 2011 and 2012 Year 1 students, this paper focuses on the analysis of how RI RE program affects students'learning and development. This development is evaluated based on learning attitudes, competencies, core values that the school hopes to instill in its students, time management, ideas of self-concepts, and the ability to verify and manage a variety of information. Attempts are also made to show how the RI RE program has helped students to acquire skills needed for data collection, analysis and interpretation and how its out of the classroom component has fostered the Year 1 students' development. Ultimately, this paper hopes to highlight strategies to sustain students' interest in research and ways to encourage goal directed behavior, especially when students are engaged in extensive and rigorous studies.

D.25 Rebecca Stobaugh. ***Are You in a Critical Thinking Coma?*** **(D.25)** Do you want to increase the number and improve the quality of critical-thinking tasks and assessments used with your students, but are unsure of what to do? This session will present several strategies to boost the level of cognitive complexity in instructional tasks and assessments. Several examples of each strategy will be presented. Participants will experience the strategies and then plan ways to implement them. Come learn, participate, then implement.

D.26 Richard M. Cash. ***Articulating, Aligning and Accounting (AAA) Secondary Courses for Advanced Learners*** **(D.26)** Honors or advanced level courses are a common way for meeting the needs of gifted and academically talented secondary students. Unlike the Advanced Placement (AP) or International Baccalaureate (IB) programs, there is no universal definition of an honors course. Without consistency these courses justly deserve scrutiny and continuous review. In some cases, university and college placement officers have been "un-honoring" courses on applicants' transcripts because of the preserved course inflation factor. To ensure honors courses are truly rigorous and differentiated to meet the needs of advanced secondary learners, join this session to learn how schools can *articulate* the specifics of an honors course, *align* the course work to the comprehensive school curriculum, and put in place *accountability* measures to ensure fidelity and integrity of practice. Using the theoretical groundings of appropriate curricular practices for gifted students (VanTassel-Baska & Stambaugh, 2005) and instructional methodology defined in Moon and Dixon (2006), the presenter has created a comprehensive guide for helping schools articulate, align, and account for honors courses. Using experience of more than 25 years in secondary gifted education, the presenter articulates honors or advanced courses at the secondary level as being differentiated in three specific means: acceleration of instructional pace; depth of significant content; and infusion of sophisticated complex thinking and performance. This session will offer appropriate instructional practices; curricular and lesson design suitable for gifted secondary students, and authentic project assignments.

D.27 Scott Hobson. ***The 21st Century Thinking for the 21st Century Gifted Classroom*** **(D.27)** Educators are constantly barraged with demands from all sides of the educational establishment. Stated overtly and covertly by parents and educational leaders is the need for our best and brightest students to be intellectually challenged in classrooms and in schools. This presentation introduces unique activities that have been created and gathered by the presenter to address the significant need of motivating and reaching gifted and highly able students in the classroom and beyond. Each attendee will leave with new ideas to increase teaching options and enhance critical thinking through high motivating activities and instructional strategies. This session will help participants develop a Balanced Thinking Approach to assist

their students to develop fluency in thinking and writing. Divergent and Convergent Thinking Skills will be linked with aspects of Cultural Literacy. During this engaging and interactive presentation, the group will participate in activities that are easily brought back and used in the classroom to encourage balanced thinking, team/community building, and increased cognitive skills. They will gain timesaving differentiating strategies and creative ideas to facilitate high interest activities. Grade 2-9 educators will enjoy discovering ways to meet "Standards" without compromising their own. This will ultimately lead to increased student performance.

D.28 Shelagh Gallagher. ***Problem-Based Learning: Bringing Authentic, Rigorous Learning from Theory to Practice*** **(D.28)** Mark Twain once said, "A man who carries a cat by the tail learns something he can learn in no other way." This is the philosophy behind Problem-Based Learning (PBL): immerse students in real world problems in order to learn the core curriculum. While searching for solutions students simultaneously learn content and improve their skills in research, higher order thinking, decision making, collaboration and more. After a brief experience with a PBL unit, the presentation will turn to a discussion of 1) the PBL model's theoretical grounding in Bruner's approach to curriculum, emphasizing inquiry and the structure of the discipline 2) the core components of a PBL unit, including the ill-structured problem, stakeholder role, and teacher-as-coach, 3) the progression of a PBL unit, and 4) methods of embedding instruction and assessment into a PBL experience. A summary of the substantial research base in Problem-Based Learning will ground discussion of the model's efficacy, focusing on research investigating content acquisition, student motivation, best practice in PBL design and instruction, and using PBL to identify previously unrecognized academic potential. Ample opportunity for questions and answers will be provided, along with examples of PBL units from different disciplines.

D.29 Stefanie Denise Livers; Minda Paxton; Nicole O'Grady; Michael Tontillo. ***Celebrating Curriculum Compacting: Teacher Candidates Supporting Differentiated Instruction in Elementary Mathematics*** **(D.29)** To meet the challenges of classrooms composed of diverse learners and to address the content of The Common Core Standards for Mathematics (CCSSO, 2010); differentiated instruction is a necessity for an effective instructional practice. This is especially true for our gifted students. To maximize teachers' instructional time and respect the prior knowledge of students, curriculum compacting provides optimal results. Compacting is an acceleration practice that eliminates content that students have previously mastered and provides them with a pace and content that matches students' knowledge and abilities (Reis & Westberg, 1994); acceleration yields the most effective results for gifted students (Colangelo, Assouline, & Gross, 2004). The difficulties in implementing curriculum compacting is managing those that have mastered the target content and are ready to go deeper within a given mathematics content. By partnering with the local university, one elementary school provides curriculum compacting by using teacher candidates enrolled in elementary mathematics methods courses. Teacher candidates are selected and volunteer their time to curriculum compact for third grade classrooms. This time is in addition to their field placement hours required by their elementary education teacher preparation program. The teacher candidates meet with the school's gifted and talented coordinator, collaborate with their elementary mathematics methods instructor in preparation for working with students who have successfully passed the pre-assessments with a 90% or higher. This partnership benefits all stakeholders; the most important benefit is to the gifted students whose time, knowledge, and abilities are respected and applied.

D.30 Sue Harvey; Joan Jacobs. ***RX for Success: Strategies 101*** **(D.30)** Creating a classroom environment that emphasizes student learning requires teachers to be comfortable using a wide range of strategies. This session will provide participants a wealth of strategies for differentiation, including Frayer Model, Venn Diagrams, Starburst, graphic organizers, morphological synthesis, Johari Window, SCAMPER, RAFT, and Topic Generator. Presenters will provide examples and applications across curricular areas in K-12 so that participants learn to select strategies that are congruent with the contextual purpose, teacher style, and student needs. Presenters will emphasize depth and complexity. Both new and experienced teachers will benefit from the strategies presented. Challenging gifted students to develop expertise and motivation to learn requires instructional strategies that resonate with advanced learners. Yet teacher preparation programs often ignore gifted learners and teachers may not know how to inspire advanced learning. To ensure continued progress, it is imperative that the level, complexity, and pace of curricula should be matched to students' readiness. Gifted students and their teachers benefit from a wide range of strategies chosen for particular purposes and learners. Effective use of these strategies helps ensure that gifted learners realize their full potential. This presentation contains a variety of strategies that offer the kinds of complex and interesting experiences that appeal to talented students. In general, these strategies offer: (i) Complexity in thinking; (ii) High levels of critical and creative thinking; (iii) Methods for increasing the ability to teach abstract concepts; (iv) A

balance between cognitive and affective development; (v) Original production; and (vi) A balance between individual and group work.

D.31 Denise Zigler. *Warm is Your Coat?* (D.31) The primary learning outcomes: (i) The learner will be able to increase their understanding of and comfort with the nature of science and the scientific process through the context of an interesting real-world scientific interactive hands-on lesson; and (ii) The presenter will share with teachers a power-point lesson/hand-out entitled How Warm is Your Coat, a step-by-step blubber experiment/lesson designed especially to be used with gifted learners. Following the power-point demonstration, teachers will follow the procedure to investigate and conduct their own blubber experiment. This session seeks: (a) For participants to use the materials/ideas and a lesson plan provided in this session to differentiate and use with gifted students. Teachers will follow the procedure to investigate and conduct a blubber experiment; and (b) To investigate, inquire, and analyze, chart and record data through a hands-on lesson with teacher involvement-How Warm is Your Coat, in which teachers can implement into their curriculum and use with diverse gifted learners. The content in this session consist of teacher participation in hands-on activities, visual demonstrations, and a power-point demonstration. Handouts will include How Warm is Your Coat power-point/ and lesson plan.

D.32 Michael Clay Thompson. *The Poetry of Prose* (D.32) The study of technical poetics is a sometimes neglected element of formal language study, but we neglect poetics at our peril. These techniques are important not only in poetry but also in prose; great novelists tend also to write poetry and to use the techniques learned from poetry in their novels. Poetry is a training ground for great writing and great reading. This session will provide participants with an introduction to the terms of technical poetics and an array of examples of how these techniques are present in great prose.

D.33 Michelle Bannister-Tyrrell; Susen Smith; Peter Merrotsy. *The Engagement of Metacognition by Young Talented Readers During Critical Literacy Discourse* (D.33) '*It is thinking that makes what we read ours*'. This quote by John Locke pries open the Pandora's box of misunderstanding and complacency about the learning and teaching needs of talented readers in classrooms across the world. Little empirical research has focused on talented readers as highlighted by a review of the literature by Sally Reis et al. in 2004. With a better understanding of the self-systems that enable advanced reading skills clearly needed, this presentation will discuss the findings of one study that focused on the metacognitive processes adopted by young talented readers during critical literacy activities compared with their typical peers. The study uncovered a number of ways in which talented and typical readers differ in their transference of reading skills and strategies across different contexts, as well as differences in monitoring, planning and controlling responses, and problem solving abilities. The findings of this study also support the growing evidence that metacognition and self-regulation are not late developing skills as previously believed. This presentation will also redress previously held beliefs that talented readers should not be considered gifted students, and how research and current theory validates the inclusion of these students in gifted pedagogy. Finally, this presentation will show practical ways for how teachers might better meet the specific learning needs of young talented readers in their reading programs, based on research evidence and best practice.

D.34 Myriam Borges Thompson. *Teaching Spanish to Gifted Students* (D.34) In learning Spanish as a foreign language, gifted students must be challenged as much—if not more—as they are in other academic subjects. It is surprising to see that in most schools and programs for talented and gifted learners, the traditional approach to teaching Spanish is characterized by placing emphasis on the memorization of vocabulary, verb conjugations, grammar exercises, and cultural activities that ignore the complexities and beauty of learning about the way of thinking about the world shared by a group of people with a unique history. The exposure to History (Roman Spain), Philosophy (Séneca), Art (Velázquez's "Las Meninas"), Music (Bag pipes in Galicia, Flamenco, and the works of the Spanish composer, Manuel de Falla), Science (Medicine and Agricultural achievements in medieval Spain), Math and Architecture (The Alhambra), Fiction (Nobel prize winners from the Spanish speaking world), and Poetry (Lorca), the students will gain a knowledge-based appreciation of the Spanish language. Students will learn about the differences and similarities that make studying a foreign language an exploration of our common humanity.

D.35 Myriam Borges Thompson. *The Spain within US* (D.35) History, language, architecture, and art in the United States have important connections to Spain and Spanish that for gifted students represent a rigorous approach to the appreciation of the Spanish language and culture. There are words in American English that come from the Spanish words the conquistadors made up from the indigenous sounds they first heard in the New World. Some of these

words are barbecue (barbacoa), canoe (canoa), hurricane (huracán), hammock (hamaca), manatee (manatí), maraca (maraca), papaya (papaya), tomato (tomato), chocolate (chocolate) and chili (chile). Other English words come from Spanish terms that define advances in math and science or from the culture of comfort and luxuries brought to Medieval Spain by the Arabs in the Eighth Century, including admiral (almirante), sofa (sofá), sugar (azúcar), algebra (álgebra), alchemy (alquimia), almanac (almanaque), check-mate (jaque mate), alcohol (alcohol), coffee (café), saffron, (azafrán), amber (ámbar),, alcove (alcoba), and jasmine (jazmín). History also offers a unique opportunity to view Spain's presence in the United States. The oldest documents in the United States, the parish records of a church in Florida, are in Spanish. The oldest school structure is also in Florida. The names of states such as Arizona, Colorado, California, Florida, and Texas are Spanish, and the names of cities such as San Francisco or Galveston, which honors Bernardo de Galvés, and river names such as the Rio Grande are Spanish. The most widely accepted theory, according to the Bureau of Engraving and Printing, for the origin of the $ sign for the American dollar goes back to the colonial revolutionary period when the new nation used pesos and the finals in the abbreviation of the word pesos evolved to $: peso$. Architecture and art in American cities such as San Antonio, Saint Augustine, San Francisco, Los Angeles, Kansas City, Chicago, and Miami reflect the strong presence of Spain within US. The development of study units that create an awareness of these artistic elements that are already integrated into their culture will allow gifted students to research, expand and appreciate the Spain with US.

D.36 Picca Stella Hong Sin. ***Constructing a Rubric as Part of Assessment as Learning*** **(D.36)** The focus of assessment as learning is the pupils and their metacognitive process. The pupils' active role in the learning process is encouraged and supported by including the pupils in critical and constructive decision making. The teacher's role therefore is to promote the development of independent learners by helping the pupils acquire the skills and ability to be their own assessors, and bringing to the foreground their metacognitive processes. The teacher presents and models structured opportunities for pupils to self-assess, and critically reflect on the learning process. By modeling and teaching the skills of self-assessment, the teacher works with the pupils to develop clear criteria of what class participation entails, and construct the rubric that measures the level of class participation. The rubric constructed measures the following components: level of engagement, quality of engagement, questioning and listening. Class participation is an important aspect of an inquiry driven classroom; this is more so with high-ability pupils involved in this study. In the Singapore context, pupils are often reluctant to participate in class due to a variety of factors, such as cultural, social, and emotional. The presenter aims to trace how the pupil's active involvement in the construction of the rubric, develops internal feedback and self-monitoring mechanisms to validate and question their own thinking, and to become confident and independent learners.

T.9 John Helfen. ***Demystifying the Learning of Algebra*** **(T.9)** Hands-On Equations is a supplementary program that can be used with any math curriculum to provide students with a solid foundation for success with algebra. It uses the visual and kinesthetic approach developed by Dr. Henry Borenson to demystify abstract algebraic concepts. The program enhances student self-esteem.

5 – EDUCATIONAL TECHNOLOGY

E.3 Ian Warwick; Adrian Hall. ***IGGY Students Creatively Transforming Online Dictionaries*** **(E.3)** Working from a games and online community background, the International Gateway for Gifted Youth, sponsored by the University of Warwick, asked themselves how they could enable a community of students to: (i) Interact with each other to share their thoughts about and understandings of words that matter across subject areas; (ii) Help to create customized definitions and explanations of words with and for each other; (iii) Support younger members in gaining an inside track for the highest utility words; (iv) Present their word discoveries in a way that doesn't limit what they mean but enhances their depth; and (v) Help to make idiomatic words come alive in all their connectivity, resonance and complexity. In addition, they wanted to demonstrate how that journey could offer the students informative and transformative insights on language. Throughout this journey, the students are treated as interactive researchers and language creators in an online community of inquiry. The students take on the role of creating a series of reconstructed, rephrased and reframed definitions and visualizations that help key academic words to live and breathe that the students then share with students in the wider academic community as an example of what students can do when they are taken off the leash. This paper focuses on how this is being achieved and where this program will go next for IGGYs students, with them exploring words that need resuscitating or that travel between languages well or ideas that we don't yet have words for.

E.4 Wenda Sheard. ***Universal Design Practices: A Marriage of Technology and Differentiation*** **(E.4)** Easy-to-implement universal design practices reduce barriers in instruction for all students, including gifted students who crave challenge, students with limited English proficiency who need language acquisition assistance, and students with diagnosed and undiagnosed disabilities who benefit from multiple means of accessing, sharing, and expressing information. Hear about the architectural and product design roots of universal design in the United States and Europe. Learn about the symbiotic relationship between universal design principles and curricular differentiation. Learn about free curricular differentiation resources available online from growing numbers of proponents of universal design practices. Learn how to assess whether a particular bit of education technology—be it software or hardware—might enhance universal design practices. Hear the presenter cite, discuss, and analyze recent brain research supporting universal design practices. See examples of federal and state education laws encouraging the adoption of universal design practices. Appreciate how universal design practices promise to blend technology and differentiation into a seamless whole for the benefit of all children. Leave with strategies to implement now, and hopes for the future.

E.5 Taisir Subhi Yamin. ***Renzulli Learning System (RLS)*** **(E.5)** If the educational systems are to achieve the potential of the digital world then they need to do a lot of work to optimise the use of technology and computerised platforms and systems in educational settings. The future will witness a number of programmes and special provisions, including: tele-mentoring; online enrichment clustering; e-learning and virtual learning environments; teaching for productive thinking and future problem solving; global networks and forums for: students, teachers, parents and scholars aimed at sharing: knowledge, experience, interests, values and outcomes and benefits. The general approach recommended in this chapter is one of infusing more effective thinking skill practices into existing school structures rather than replacing the ways in which schools are organized and operated. It is aimed at introducing advanced models, processes and systems in e-learning and school management. This presentation will introduce one advanced model for excellence in education, including: *The RLS* (which is the first integrated systems introduced to the educational system in the USA and a number of other countries around the world. It is used to identify and develop the gifts and talents of all children by providing easily accessible high quality materials and resources. It is an exciting on-line comprehensive system that matches students' abilities, interests, learning styles and can help teachers access, with minimal cost or time, a wealth of opportunities to provide packages for productive thinking skills and appropriate differentiation activities for students of all levels of achievement and abilities).

E.6 Stanislav Zelenda. ***"T-burrow" on Online Environment for Young Gifted Kids*** **(E.6)** Since 2003 we have gained some good experience on development of gifted pupils at the age of 13 -19 in sciences, math and technology in the project Talent. The fundament is based in online communication, leading and support of experts and pupils in the frame of different learning and enquiry based activities. But we have also found that we should "start with gifted earlier". It means to offer some time and place independent support and simulating opportunities to younger pupils. The effort fullness and ponderousness of asynchronous online communications keeps from using traditional online learning and collaboration methods with younger children. Therefore since 2011 we have developed and piloted ways and tools that enable us to work remotely with young gifted pupils at the age of 9-11. We combine online environment for teachers as local facilitators with online environment for pupils in the form of so called T-burrow. The expert prepares the topic, problem or the assignment online with the teacher. The teacher introduce the task in the classroom and facilitate collaboration of pupils and pupils put their ideas, questions, results and outputs into the online environment and go on in communication with the expert as they need or like. Practical examples from math, biology, and physics will be presented with the preliminary evaluation of these tools and methods.

G.1 Barbara Bannister. ***Creative use of Digital Technologies Provides Opportunities for Rural Gifted Students*** **(G.1)** An academically selective virtual high school in western New South Wales, Australia is providing opportunities for gifted students never before available. Students attend their local public high school and complete courses such as music, physical education, art and applied technologies with their local cohort. English, mathematics and science however are completed in a blended learning environment where students and teachers from an area covering some 385 000 km^2 meet online using web conferencing software to engage in real time, and then further material is placed in an online learning repository (Moodle) for access by students at any time. This mix of synchronous and asynchronous learning with a cohort of like minds is improving the educational opportunities for gifted students in a rural setting without depleting the local community of its best and brightest students. Similarly, teachers from these rural communities teach 0.4 of their time in the virtual high school and 0.6 of their time in the local public high school. This has lifted the school capacity overall without depleting the best, and often the most creative teachers from the local school. Currently the

provision is a collaboration across 31 different public high schools. The paper speaks about the mechanism that has provided this opportunity, some of the successes so far and some of the challenges overcome. Of particular note is the fact that the school caters for gifted students that are twice or multi exceptional, of Aboriginal or Torres Strait Islander descent, of English as a second language background and Anglo-Saxon descent.

G.2 Bruce Kline. ***Stress Management for the Digital Age*** **(G.2)** This presentation will focus on how to manage the new stressors of the digital age for children and youth. Special highlights will include smart phone use and social networking management, computers, video-gaming (When gaming is good for you!), and antidotes for boredom. What brain plasticity is and how it relates to focus and concentration, and the imperative of adult supervision promoting self-management and self-control will be addressed as well. Specific areas of discussion will expand on the importance of managing the stressors for gifted populations, who may be more sensitive to typical life stressors and the intense demands of school, work, and relationships. Balancing the importance of relationships and socialization can be overwhelming when measured against the demands of curricular and academic progress. Finding that balance requires guidance, strong relationships with adults as well as peers, and a strong sense of personal empowerment. These are all significant themes that return at each major life transition.

H.17 Cher Kuan Thio. ***Learning Physics through ICT Simulation Tools*** **(H.17)** Beginning high ability Physics students are able to understand Physics theories, but they sometimes have difficulty applying them. They tend to see real world situations and Physics theories as unrelated entities and do not seem to be able to connect them together. Physics teachers usually use videos or teacher demonstrations to address this gap. However, students sometimes feel that the demonstrations are staged, and treat them like a magic show that has no bearings on reality. To address this gap, the presenter will model how to help students to make these connections through doing. Through the use of simulation tools, students can learn to apply Physics theories to solve authentic problems. In Kinematics, for instance, students are trained to make use of video motion tracker and videos of simple motions to understand the various kinematics concepts and graphs. Once students are skilled with the video analyzer, they can record a video of a real world motion they are interested in and analyze it. In a unit on understanding sound, students make use of audio software to capture and visualize their voice. They can then manipulate the different variables of sound to alter the loudness and the pitch of the sound and then apply their understanding of sound to create a specific tune from scratch. This presentation aims to show how the use of ICT tools in teaching can help bridge the conceptual gap for a group of high-ability students between real world situations and Physics theories.

H.18 Ginger Lewman. ***Hooking Your Community: Gamification in Gifted Education*** **(H.18)** What is it that creators of video games, retail stores, online social networks, and marketing gurus use to keep their audiences consistently coming back for more? And can we leverage some of the same techniques to get our gifted education communities more deeply involved in our schools? This session helps us learn some of the strategies that marketers are using, while participants actively explore options for gifted programs.

H.19 Ginger Lewman. ***Students as Self-Advocates: Why/ How Learners Should Craft their Own Digital Footprints*** **(H.19)** When you last "Googled" your name, what did you find? All learners should ponder those results when considering potential colleges, scholarships, jobs, and even future mates. Is it better for the results to come up poorly or not at all? Come learn how we can help our children become more digitally literate and earn an A+ in Digital Citizenship.

H.20 Kathy Jones. ***Digital Advocacy: Communicating with Millennials*** **(H.20)** The current generation of parents and teachers of gifted children obtain their information digitally; rarely reading newspapers and magazines in their traditional forms. As advocates we must adapt to the methods they use: social media, blogging and other online means of communication. Through dialogue and numerous examples of effective advocacy tools and campaigns, this presentation will assist in the understanding of the need for and implementation of advocacy strategies using the digital universe.

I.11 Minh Kim. ***Current Applications Available on Mobiles/ Tablets for Gifted Education*** **(I.11)** In this mobiles and tablets world, methods and models in gifted education need to be revised to take advantage of the new and neat appearance of applications in Android or IOS formats. This presentation will first provide a quick scan of current applications on mobiles/tablets that are useful for gifted education. It will then introduce a prototype application for mobile/tablet devices that the author and collaborators have just developed.

I.12 Nancy N. Heilbronner. ***Think Instruments, Think iPads: Apps Under $1 that will Transform Your Science Investigations*** **(I.12)** Educational theorists (e.g., Renzulli,) have repeatedly emphasized the importance of authentic learning in the classroom. When students are engaged with authentic learning in science, they naturally take on the roles of practitioners, performing the work of biologists, chemists, engineers, and more, and in the process, design and conduct investigations. However, to do so successfully, students must possess scientific instruments with which to explore the world around them. Normally, these instruments are expensive and so classrooms have few of them, limiting investigations. However, with the advent of app technology, many instruments are available for free or little cost that can be downloaded onto an iPad or iPhone. During this informative and engaging workshop, participants will explore 10 useful apps for the classroom that cost less than one dollar including: Teslameter (measures magnetic induction); Metronome (keeps time); HD (measures decibel level); Pocket t (includes two types of levels); Seismic (measures seismic readings); Compass (digital compass); Pronto (digital stopwatch); Toolbox (includes a magnifying glass and a morse code generator); Chronometer (measures latitude and longitude) and Vital Signs (measures breathing and heart rate). Participants will be able to download these apps onto their own devices and then explore ways to use them in the classroom. They will also learn how to teach students to develop their own research questions and investigations using the app-based instruments. Strategies for differentiating for the advanced learner will also be provided.

K.5 Kimberly P. Clayton-Code. ***Gifted Students Views and Usage of Technology*** **(K.5)** This session will present the findings of a research study of gifted and talented students' views on and usage of technology both in and outside of school. Today's K-12 students are natives to the digital world--they live in a world of instant communication, infinite information, and ever-changing technology. It is crucial that we prepare students for 21st century literacy as individuals who are able to utilize higher order thinking, are creative, are at ease with technology, and can work collaboratively. Gifted and talented students typically possess skills that are particularly effective with theses skills and enhanced by technology. It is incumbent upon educators to incorporate technology within instructional practices. The question arises as to how gifted and talented students are actually using technology and how they define it. In order to understand how gifted and talented students define and use technology, gifted and talented students were surveyed. Specific ideas and implications for instruction and differentiation of curriculum will be included in the presentation.

6 – DEVELOPING FUTURE LEADERS

F.3 Kate Bachtel. ***Lighting Leadership Spark in Gifted Girls*** **(F.3)** The chameleon nature of gifted girls has been known for some time. Given their inherent adaptation and assimilation ability, how can we support gifted girls in revealing their true selves and growing into inspiring learners and leaders who affect positive change in the world? Veiling one's true self can place gifted girls at risk, not only for being under-served, but potentially for self-alienation and self-harm as well. This session will share the results and impact of a girl's leadership program designed for second through fifth grade, gifted girls. Fourth and fifth grade girls are trained to facilitate a book study with second and third grade girls using the book Just Grace by Carise Mericle Harper. As empathy is a strong indicator of giftedness and the main character in this book posses this "superpower," a powerful opportunity presents for girls to better understand themselves, grow leadership skills and emotional intelligence while also strengthening relationships. The underlying desire is for all gifted learners, including our girls, to have confidence in the beauty of all their gifts, as well as patience for and understanding of their varied sensitivities. After sharing about the girl's leadership program, I will facilitate discussion on other avenues for growing leadership in gifted girls. This session is designed as a think tank for educators to share, collaborate and brainstorm on programming that can be applied to a variety of school settings to spark leadership development in girls.

F.4 Frances Karnes. ***Leadership Development for the Gifted Children in the Elementary School*** **(F.4)** Leadership development of gifted children at the elementary school level should be a high priority. Through effective leadership students can become actively involved as leaders in their schools, communities and religious affiliations. An overview will be given of commercially available screening and identification instruments appropriate for students of elementary school age. A diagnostic/prescriptive instrument for instruction will be presented and its application to classroom practices will be demonstrated. Commercially available instructional materials will be highlighted. Each participant will have the opportunity to plan for the incorporation of leadership concepts and skills and their application in his/her classroom.

F.5 Lisa Murley; Pamela Jukes; Jeanine Huss; Judy Pierce. ***How Teacher Candidates Develop Future P-12 Leaders*** **(F.5)** Leadership ability is one of the areas in which P-12 students may be identified as gifted and talented in Kentucky. The most recent research for developing leadership skills of P-12 students advocates *The Leader in Me* principles. Western Kentucky University prepares teacher candidates to meet the needs of P-12 gifted students using these principles. Teacher candidates observe, develop, and teach lessons in field-based classrooms which allow them to teach content as well as gain real life experiences in developing leadership abilities in P-12 students. Teacher candidates learn that leadership takes many forms such as creativity, managing self, setting and attaining goals, innovative problem solving abilities, creative cooperation, responsibility, collaborative skills, and continuous improvement for increased capacity. The university professor provides an overview of the *Leader in Me* principles first and then teacher candidates collaborate with the field teacher to design and implement lessons addressing one or more of these principles. Feedback from the teacher candidates indicates this assignment increases an awareness of the importance of leadership principles as an essential part of the curriculum. In addition, teacher candidates address giftedness within the lesson planning as related to leadership abilities. By expanding giftedness to include leadership abilities, teacher candidates apply Carol Dweck's (2007) work of addressing the difference between a fixed and growth mindset. Students with a fixed mindset are afraid of failure and do not know how to overcome it. The *Leader in Me* principles help develop the growth mindset where students are more likely to explore various leadership opportunities.

H.1 Kimberley Chandler. ***The School Head as a Leader in Gifted Education*** **(H.1)** In considering the ways in which gifted students' needs may be met, the role of the School head has rarely been considered in the literature in relationship to gifted education. Most references concern general program development issues. Weber, Colarulli-Daniels, and Leinhauser (2003) studied the role of school heads in relationship to meeting the needs of gifted and talented children. They found limited information about the role of the principal in elementary schools relative to gifted learners. Lewis, Cruzeiro, & Hall (2007) conducted a qualitative study in which they interviewed two elementary school heads known to be supportive of gifted education in their schools; they found that although their gifted programs were considered strong enough for the state director of gifted education to recommend them, there were certain elements of quality instruction that they did not apply to their school's gifted programs. School heads can have a tremendous influence on how teachers' and counselors' time is scheduled and utilized to enable them to address the special needs of highly able students. To develop a comprehensive program for gifted children, the building administrator must have at least a working knowledge of gifted education. This case study research examined the role of principal/school head leadership in ensuring that the social-emotional and academic planning needs of gifted students are addressed deliberately and consistently. The findings have important ramifications for administrator training and teacher professional development about managing effective differentiation in the heterogeneous classroom.

H.2 Oleksandr Burov; Mykhailo Pertzev. ***How to Help a Gifted Child Turn into a Successful Adult: Achievements vs. Hidden Potential*** **(H.2)** It is known that not all gifted children realize their potential in life. The main reasons for this fact can be explained by two mistakes in working with the gifted: (1) giftedness identification is based on achievement, not on the real potential of a child; (2) gifted abilities of a particular child can change over time and, as a result, can affect motivation and the actual field of preferable area of work. To analyze lessons learned from the implementation of a computer system developed to assess and to predict field(s) for the most preferable application of a child's giftedness. The computer system was developed to assess and to predict field(s) of the most preferable application of a child's giftedness. Psychological tests were included and the system evaluated an individual structure of intelligence, information "metabolism," and vegetative nerve system balancing, as well as strength, liability, and functional mobility of the nervous system. The system was used to monitor more than 3500 schoolchildren in grades 8 through 11. The discussion also reviews specific cases (1) to reveal a hidden ability for scientific work, (2) two cases when children who were graduating from school did not follow recommendations and entered the "wrong" specialty at university and had to leave, (3) three cases when graduated children who had been recognized as children with high achievements in particular areas changed their preliminarily defined future fields (according to recommendations after the test), and recognized that it was right decision (as monitored over ten years from school to work after university graduating).

7 – GIFTEDNESS: THEORY, RESEARCH, PRACTICES, AND FUTURE TRENDS

A.1 Kyung-hwa Lee; Kyoung-hoon Lew. ***The Effect of Creativity Education in the 'Model School'*** **(A.1)** The creativity education policy was announced in 2010 through the Korean Ministry of Education and 196 model schools of creativity

were selected nationwide. The curriculum based on creativity and personality education was applied to Korean schools, and the government supported them with focus on the model schools. This research was conducted in order to find out the effect of creativity and personality education over the span of three years. The goal of this research was to determine the effectiveness of applying creativity curriculum to the model schools and to analyze regional differences and the differences between school levels (elementary, middle, and high school). Two research questions were: (i) Is there any significant difference in the creative thinking ability and creative personality between model schools and regular schools? (ii) Is there any significant difference in the model school students' creative thinking ability and creative personality according to their region? The participants of this research were elementary, middle, and high school students of model schools (N=621) and regular schools (N=663). The Integrated Creativity Test developed and validated by Lee & Lew (2012) was used for measuring students' creativity. The data were analyzed with descriptive statistics, t-test, one-way ANOVA and Scheffé post-hoc analyzed by using SPSS 18.0 program. The results of this research were: the students' creative thinking ability and creative personality were statistically different between model schools and regular schools; and, the students' creative thinking ability and creative personality in model schools were statistically different among regions. The result of this research has implications to formulate and promote the educational policy in the future.

A.2 Nathan Levy. ***Powerful Strategies to Enhance the Learning of Gifted & Highly Capable Students*** **(A.2)** This workshop explores numerous, proven ways to reach gifted learners in challenging ways. The objective is to have participants leave with a variety of new strategies and specific ideas to help pupils become better creative and critical thinkers. A variety of successful teaching and parenting techniques will be shared. Bring your thinking caps and your funny bones. Educators are constantly barraged with demands from all sides of the educational establishment. Stated covertly by parents and educational leaders is the need for our best and brightest students to be intellectually challenged in classrooms and in schools. This presentation introduces unique activities that have been created and gathered by the presenter over many years, in his role as a teacher, principal, staff developer, gifted coordinator, and teacher trainer.

A.3 Nikki Logan. ***An Examination of Attitudes and Actions of Regular Classroom and Gifted Teachers Towards Differentiating for Gifted Learners Involved in a Pullout Gifted Program*** **(A.3)** Bridging the gap in student performance has changed the teaching practice in classrooms across America. Educators have the responsibility to teach all learners. There is a need for instruction to be tailored to boost the higher-level achievers and balance the gaps. This study examined the attitudes and actions of regular and gifted teachers toward differentiating instruction for gifted learners to find out: (a) the types of differentiated instruction regular classroom teachers use for gifted learners, (b) the differences in gifted teachers' lesson plans from regular teachers' lesson plans, (c) the evidence in lesson plans that demonstrate differentiated instruction, and (d) the comparison of regular teachers and gifted teachers attitudes toward providing differentiation for gifted learners. The mixed methods design provided both quantitative and qualitative data. Subjects were regular and gifted teachers in grades second through fifth in a rural school district located in the Southeast United States. The quantitative data stated there was a significant difference in the mean attitude between regular and gifted teachers. Thus, the null hypothesis was rejected. A comprehensive look at the individual responses between both groups provided a comparison of the groups' responses to the survey items. Additional data was collected and analyzed through the qualitative portion of the study. Lesson plans were coded for themes and patterns. Five observations were conducted to determine the types of instructional strategies used to provide differentiation. Effective differentiation was documented through the observations. However, the weakest component of differentiation documentation was in the lesson plans. Based on the results of this study for both types of data, it was concluded there is a need for professional development to bridge the gap in understanding and implementation of differentiated instruction.

A.4 Diana Tabatabai; Bruce M. Shore; Mark W. Aulls. ***Anticipating the Heart of Pedagogy in Gifted Education: Secondary Student Teachers' Specialization in Relation to their Own Best-Recalled Prior Inquiry Experiences*** **(A.4)** Nearly all gifted curricular models include inquiry. Inquiry instruction depends on teachers' inquiry abilities. This study explored the relation between pre-service secondary teachers' prior inquiry experiences and their chosen teaching subject. A survey of 168 participants first asked them to recall as many inquiry experiences as possible during all their schooling, and to choose the one they regarded as best or most salient; 152 participants reported 939 instances. The largest category of best-inquiry experiences was research (49 participants). The largest subcategory (33) was interest- or curiosity-driven research; 41 (overlapping the 33) noted taking responsibility for learning. These best experiences were therefore good inquiry examples. The most best-inquiry experiences occurred in mathematics and social sciences (each 44), followed by English or languages (31), and physical education (29). Teaching concentration was identified by 167 participants: 76 English or languages, 39 physical education, then 35 social sciences and arts. Only 17 identified mathematics, science,

or technology. Participants whose best inquiry was in social sciences or physical education typically planned to teach those subjects. Surprisingly, although nearly half remembered best inquiry experiences in mathematics, most elected to teach language arts or languages. This does not inform us whether some student-teachers remembered their best inquiry subject because they are now teaching it or they teach it because they had their best inquiry in that subject. Nevertheless, the centrality of inquiry as pedagogy in gifted education can likely be served by teachers who had best-inquiry experiences in other than their current specialty: Inquiry has its own impact.

A.5 Donna Y Ford; Stanford O Amos. ***No Gifts Denied: Recruiting and Retaining Black and Hispanic Students in Gifted Education*** **(A.5)** This session focuses on one of the most controversial issues and realities in gifted education - the under-representation of Black males and females in gifted education. Data on under-representation are presented for the U.S. based on the Office for Civil Rights Survey (2009). Participants will be exposed to the OCR civil rights survey website, be given guidance in calculating under-representation, and be introduced to the first author's gifted equity formula. The equity formula calculates the minimal goal that each school district must target based on the percentage of Black students and Hispanic students in the district compared to their representation in gifted education. All factors contributing to underrepresentation among Hispanic and Black students are shared (referral, tests, instruments, policies, procedures, and so on), along with substantive recommendations and resources.

A.6 Andrew Almazan-Anaya. ***In Search of the Gifted Child Profile, Results of the XXI Century´s Largest Study on Giftedness*** **(A.6)** This individual presentation is a report of the XXI century´s largest original study performed on gifted children, where it describes the psychological and physical profile of children with giftedness. The research was done at the Talent Attention Center (CEDAT). Latin America´s largest institution of giftedness, on 800 gifted children from 2 to 17 years old. The study analyzed the incidence of various psychological variables such as hyperactivity, distractibility, learning speed, visual-motor skills, verbal ability, leadership, preference group conversation, emotional sensitivity, frustration tolerance, emotional problems, bullying, rejection and social isolation, and common misdiagnosis. The physical variables studied were obesity rate, visual health, type of birth, weight and height compared to average children, brain size, feeding time and strength of the immune system. All data gathered of these 22 variables were analyzed using statistical tests with the SPSS (Statistical Package for the Social Sciences), and afterwards, they were compared against the average child's profile. These findings allowed the researchers to describe the psychological and the physical profile of gifted children throughout all childhood and adolescent years. Since 1930, a research study has not been realized, with so many cases, and of this magnitude. This study unveiled the physical and psychological traits that characterize most gifted children. And furthermore, belies the social stereotypes that have existed about the gifted child's profile.

A.7 Josien Brakke; Greet de Boer; Alexander Minnaert. ***Schools with a Gifted Profile in the Netherlands: The Current State of Affairs According to an interview with School Leaders and Teachers*** **(A.7)** In the Netherlands, between 2004 and 2009, a CPS project called "Schools with a Gifted Profile" was conducted by order of the Ministry of Education, Culture and Science. Although Twenty five schools participated in this project, these all came on board at different times (some schools having a larger/longer history in gifted education). From 2010 until present, an evaluation study has been taking place to examine the effectiveness of the Gifted Profiles on school policy, teacher behavior, feelings of well-being, and learning results of the Gifted and Talented students (G&T). The starting point is to map the current state at the project schools by an interview with school leaders and teachers. This interview is based on the standards and indicators of the "Self-evaluation instrument of schools with a gifted profile", enabling comparisons in school adaptations for the G&T (WCGTC Prague, 2011) over time. We will discuss the data with respect to the quality standards and indicators. Based on the results of the second measurement, we will present differences in the patterns of school development according to school leaders and teachers. A remarkable finding was the difference in rating between those groups. Another striking result was the fact that – besides spread between the waves of embarkation in this project – there was a large spread found in the waves as well. We will elaborate the results in respect to theories about school development (Senge et. al., 2000; Leithwood et. al., 2008; Van den Berg and Vandenberghe, 1981, 1995). Josien S. Brakke, MSc, is researcher at the University of Groningen. She studied Special Needs Education and is involved with the evaluation study mentioned above. Besides working as a researcher she also works as special need educationalist with mental disabled children. Greet C. de Boer, MSc, is a principal managing consultant at CPS educational development and consulting. She was project-leader of the Dutch National High Ability Consulting Centre and of the CPS project 'Schools with a gifted profile'. She is researcher at the University of Groningen. Her research interests are teacher competences in educating the G&T, self-regulation and motivational issues in primary and secondary education. Alexander Minnaert is full professor in Educational Sciences at the University of Groningen, The Netherlands. His research interests are

motivation, emotion, self-regulation, learning (disabilities), and intervention studies on social-emotional, motivational and cognitive issues in primary, secondary, and higher education.

A.8 Greet de Boer; Josien Brakk; Alexander Minnaert. ***Schools with a Gifted Profile in the Netherlands: Evaluation of Teacher Characteristics and Competencies According to Teachers, Students and Parents*** **(A.8)** Between 2004 and 2009, a CPS project "Schools with a Gifted Profile", was conducted by order of the Ministry of Education, Culture and Science. Twenty five schools participated in this project, all coming on board at different stages (some schools have a larger/longer history in gifted education than others). From 2010 until the present time, an evaluation study has been taking place to examine the effectiveness of the Gifted Profiles on school policy, teacher behavior, feelings of well-being, and learning outcomes of the Gifted and Talented students (G&T). The starting points are the results of the second measurement showing that teacher's skills in educating gifted students is lagging behind compared to other developments within schools. This is why we are focusing on what kind of teacher competencies are relevant for teachers, students and parents. By using the questionnaire of teacher characteristics and competencies (Chan, 2001, 2011), based on Feldhusen (1977), we found the characteristics and competencies of teachers of gifted learners are relevant in the Netherlands. Although we found a high rate of reliability of the questionnaire (α characteristics = .841, α competencies = .986), there was no similarity in rating importance of the various teacher characteristics and competencies between the three distinctive groups of respondents. We will present a factor analysis and its outcomes.

A.9 Ayşe Cilacı Tombuş; Önder Tombuş; Ümit Davaslıgil; Serap Emir. ***Data Mining Test Scores of Bright and Gifted Students*** **(A.9)** The aim of this research is to find possible inferences between intelligence level, thinking skills, creativity, mathematical ability and emotional intelligence scores in bright and gifted students attending 5th grade in the primary school for orphan children established in Turkey in 1873. The project focuses on developing a culture-specific, differentiated program to meet the intellectual, affective and social needs of bright and gifted children, as well as the training needs of their teachers. To determine these possible connections the following tests were administered: Raven's SPM Plus (intelligence level); Urbans and Jellen's test for Creative Thinking - Drawing Production (TCT-DP) (creativity); School College and Ability Test (SCAT) (mathematical ability); Davaslıgils's Figurative Thinking Skills Test (thinking skills); and EQi tests (emotional intelligence). This presentation will discuss the results of using these data mining methods and meaningful relations with these test scores that were determined.

A.10 Carolyn Kottmeyer. ***Geocaching, the Perfect Gifted Activity: Reduces Stress and Hyperactivity, Calms Anxiety, Sharpens Problem-Solving Skills and Encourages Creativity… and it's the Kind of Fun Gifted Children LOVE!*** **(A.10)** Unstructured time in nature has amazing research-proven benefits, but kids are getting less and less unstructured time outdoors (citations provided). How can we make exploring nature as appealing as a video game? Geocaching! Geocaching starts on the computer and moves outdoors, getting even the most computer-addicted gifted child (or adult) outdoors. Geocaching is popular worldwide, with 2 million active caches on all 7 continents. Geocaching explores nature, local history, geology, geography, map reading, GPS skills, problem-solving, environmental protection, exercise, and social activities with other gifted kids and adults. Get started with Geocaching: Sign up for a free account. Select a cache based on its characteristics: type, difficulty, terrain, cache size, name, description, and recent logs. Use GPS, smartphone, or Google maps, and latitude and longitude in the cache description to locate Ground Zero – cache location – then use your wits and the clues provided in the description and logs to find the cache. Learn about cache containers and locations. Discover helpful tools. Find geology lessons in earth caches, and mental exercise in puzzle caches. Discover international geography tracking travel bugs. Exercise creativity: create your own camouflaged cache container, or puzzle, as you place your own caches. Beyond the social-emotional benefits inherent in unstructured exploration of nature, there's more… find peers at geocaching events! Geocaching even incorporates service, in CITO – Cache In, Trash Out – events.

A.11 Lisa Hoffman. ***Growing Up Gifted in Two Worlds: Cultural Considerations for Educating Gifted Students from Immigrant and Refugee Backgrounds*** **(A.11)** Students who move from their home country to a new host country face challenges during the acculturation process, and gifted and talented students are no exception. The conditions of student's emigration often play a significant role in how they adjust and what educational opportunities they may have. This presentation focuses on the cultural differences and adjustment factors that face many students of immigrant and refugee backgrounds, and how gifted educators can best serve the needs of students who are in the midst of the acculturation process. Particular attention will be paid to students with refugee or asylum status and students from immigrant families without a high level of formal education. Serving gifted students from immigrant and refugee

backgrounds requires knowledge and attention to a number of considerations that gifted educators may not encounter with other populations. From cultural differences, to interrupted formal schooling, to post-traumatic stress, students from refugee and many immigrant backgrounds may encounter numerous obstacles in developing their academic gifts and talents. Educators must look carefully and creatively in order to identify immigrant or refugee students who would benefit from gifted education services and to communicate with their families. Examples of fascinating strengths and talents of gifted and talented students from refugee and immigrant backgrounds will be discussed.

A.12 Lisa Hoffman. ***What Gifted Educators Should Know About Gifted Bilingual Students and the Language Learning Process*** **(A.12)** Students learning a country's majority language in school are just as likely as native speakers to have high intellectual ability. However, many educators of gifted and talented students may not know how to identify or encourage talent development among gifted students who are also still developing language proficiency in their country's dominant language. This presentation introduces important concepts that educators of gifted students should know about the process of learning a second language, including how bilingualism may affect children's performance in different academic areas. Students who fit both the categories of "gifted" and "English language learners" comprise an understudied population (Castellano, 2003). With the school-age population of the United States including more and more children of immigrants, increasing numbers of K-12 students are likely to fall into both categories (Aguirre, 2003). However, since most traditional means of identifying high-ability students are language-dependent (Castellano, 2002), no consensus exists on how best to identify or serve students who are still learning English while being highly gifted in other areas. This presentation will discuss: findings of a study investigating the intersection of gifted education and English learner education at three levels in school systems in three U.S. states: the state-level policy on serving gifted students and English learners, the district-level practice of identifying English learners for gifted and talented services, and finally the school-level practice of providing differentiated instruction for gifted English language learners.

A.13 Kimberley Chandler. ***Giftedness Across the Lifespan: Differentiated Curriculum as an Essential Intervention*** **(A.13)** Much has been written about the developmental trajectory of gifted students and what should be expected in the cognitive, affective, and social domains. However, less information is available about the specific curricular modifications that should be made for highly able students at each stage of development. In this presentation, the speaker will address research-based recommendations for planning the curriculum offered to gifted students at key stages along the developmental continuum.

A.14 Andrew Almazan-Anaya. ***In Search of the Gifted Children Profile, Results of the XXI Century´s Largest Research on Giftedness*** **(A.14)** This individual talk is a report of the XXI century´s largest original research performed on gifted children, where it was described the psychological and physical profile of children with giftedness. The research was done in Talent Attention Center (CEDAT), Latin America´s largest institution of giftedness, on 800 gifted children from 2 to 17 years old. The study analyzed the incidence of various psychological variables such as hyperactivity, distractibility, learning speed, visual-motor skills, verbal ability, leadership, preference group conversation, emotional sensitivity, frustration tolerance, emotional problems, bullying, rejection and social isolation, and common misdiagnosis. The physical variables studied were obesity rate, visual health, type of birth, weight and height compared to average children, brain size, feeding time and strength of the immune system. All data gathered of these 22 variables were analyzed using statistics tests with the SPSS (Statistical Package for the Social Sciences), and afterwards, they were compared against the average children profile. These findings allowed to describe the psychological and part of the physical profile of gifted children throughout all childhood and adolescence years. Since 1930 it had not been realized a research with so many cases and of this magnitude, because this study unveiled the physical and psychological traits that characterize most of gifted children. And furthermore, belies the social stereotypes that have existed about the gifted children profile.

A.15 Chenyao Kao. ***Examining the Differences between Mathematically Gifted Students and Their Regular Peers through the Perspective of Triarchic Theory of Intelligence*** **(A.15)** Despite being controversial, Sternberg's triarchic theory of intelligence is undisputedly one of the most frequently cited theories of intelligence in the past two decades. Criticizing the IQ score for its overly narrow representation of intellectual abilities, Sternberg suggests that there are three major aspects of human intelligence, analytical, creative, and practical intelligences. The purpose of this research study was to perform model comparisons to test for the factorial validity of the theory and to investigate the differences between mathematically gifted students and their regular peers in the three aspects of intelligence. This research, which consisted of two pilot studies and one formal large-scale study, took two years. In the formal study, 851 eighth graders were recruited from nine junior high schools located across Taiwan. Of these participants, 178 were mathematically

gifted students identified by mathematical aptitude tests with national norms. The results of comparing alternative models based on the g factor, the triarchic theory of intelligence, a traditional factorial theory, and previous research findings indicated that the model based on the triarchic theory showed a slightly better fit to the empirical data than the other three models. Further, mathematically gifted students significantly outperformed their regular peers in all the 12 subtests. In addition, male students had significantly higher scores than female students on analytical and practical quantitative subscales but female students had significantly higher scores on the essay and creative figural subtests.

A.16 Kyung-hwa Lee; Myung-sook Auh. ***A Comparative Study of Elementary Students' Creativity in Korea and Australia*** **(A.16)** With growing interest in the field of creativity worldwide, the Republic of Korea has paid more attention to the developmental aspects of creativity. Socio-cultural contexts affect the development of creativity and reflect the results of creativity tests. So this cross-cultural research between Korea and Australia was advanced using the creativity test (Lee, 2012). The creativity test was developed as a Korean version and translated into English. It was used to test children's creativity in Korea and Australia for cross-cultural research. Until now, there have not been many comparative studies of creativity, but if we know the traits of children, we are able to support each other in developing educational programs of AKC (Australia and Korea Connection). The purpose of this study is to understand cultural differences and similarities in children's creative characteristics in Korea and Australia, and also to suggest future cross cultural studies in this field. In this comparative research, the Integrated Creativity Test (ICT) (Lee, 2012) with identified validity and reliability for measuring elementary school students' creative ability and creative personalities was taken by 187 participants: 96 4th grade to 6th grade elementary school students from Korea and 91 4th grade to 6th grade elementary school students from Australia. Quantitative and qualitative data were gathered from the two countries and analyzed for traits and trends. Through this research, we identified differences and similarities for each developmental stage by culture. The responses of the creativity test were divided into factors and sub-factors: Creative Thinking Ability- fluency, flexibility, originality, elaboration, sensitive thinking; and Creative Personality- curiosity, sensitive personality, task commitment, humor, independence, leadership. These showed both similarities and differences according to three school stages and gender in Korean and Australian students. In integrated creativity and creative thinking ability, a significant difference was showed (p<.05) between the two countries but no difference in creative personality was found (p>.05). The results of gender comparison were very diverse. In the case of females, sensitive thinking and elaboration in Korean students was better than that of Australia students. However, task commitment and leadership of Australian students was better than those of Korean students. No significant difference was observed between 6th graders in creativity. Korean 5th graders' creative thinking ability was better than that of Australian students. Korean 4th grade student's creativity was better than that of Australian students. Hopefully, this research will help us to contribute to an understanding of cultural differences and similarities of students' creative characteristics in Korea and Australia.

A.17 Chin-Wen Lee. ***Preparing Culturally Competent Teachers for Gifted and Talented Students*** **(A.17)** The purpose of this paper is to present a framework for a culturally responsive teacher preparation program for the gifted and talented. The importance of addressing cultural competence in teacher preparation programs is presented first, followed by a description of the framework. In the framework, there are the premise, desired outcomes, approaches to develop cultural competence, and knowledge and skill standards. Last, the author recommends that there should be a course called *Gifted Multicultural Education* and that hands-on projects and authentic assessments should be included in the course.

A.18 Colm O'Reilly; Jennifer Cross; Mihyeon Kim. ***A Comparison of Self-Concept among Young Gifted Irish and American Students*** **(A.18)** This paper will examine the differing self-concepts amongst Irish and American students in grades 3-8 who participated in college-based enrichment programs for gifted students. One hundred seventy-two students from Ireland and America participated in the research. American students were recruited from the Center for Gifted Education Saturday/Summer Enrichment Program (SEP) while Irish students attended summer enrichment programmes at CTY Ireland. Both sets of students completed the 76-item Self-Description Questionnaire (SDQ-I) developed by Marsh (1990). This instrument describes eight self-concept scales (Academic –Mathematics, Reading, General School; non-Academic – Physical Ability, Physical Appearance, Peer Relationships, Parental Relationships; and General Self). The SDQ-1 has been noted for its strong psychometric and theoretical construct characteristics and has been identified as a reliable and valid instrument for use in clinical and research settings. Results from the questionnaires indicated significant differences in scores between the Irish and American samples. Most notably, Academic self-concept was higher among the Irish students than among the American students. Both male and female Irish students had a more positive general self-concept than the American male students, but not the American female

students. The American students had more positive scores than the Irish students in some of the subscales of non-Academic self-concept. For example, American females were more positive about their peer relationships than both male and female Irish students. In this presentation, we will explore possible explanations for these differences.

A.19 Debra Mishak. ***Bridging the Gap for Urban Poor and Culturally Diverse Gifted and Talented Learners*** **(A.19)** While many of the circumstances and challenges of urban education vary in type and intensity around the world, many urban gifted educators have a shared philosophical and practical dilemma - the identification and appropriate programming for their urban poor, minority, immigrant, refugee and second language students. In this session participants will learn about the Des Moines Public Schools, an urban district of 32,000 in the North American Midwest, and its efforts to create a successful and defensible alternative gifted and talented Identification track for its poorest and most underrepresented students. Additionally, participants will learn about the district's Prep Academy, a seventh grade program especially designed to address language arts, math and school culture gaps for these alternately identified students. Outcome data will be shared, as well as ideas for creating and implementing an alternative identification model and Prep Academy program. Time will be allowed for discussion and questions.

A.20 Debra Troxclair. ***Pre-service Teacher Attitudes toward Giftedness*** **(A.20)** Attitudes influence the teaching-learning process. The purpose of this study was to determine the attitudes toward gifted of undergraduate elementary education majors at a small, rural south-central U.S.A university. Gagne and Nadeau's (1991) Opinions about the Gifted and their Education was used. The respondents held attitudes toward gifted which were contradictory and unsupportive of practices that would provide such support such as being resistant to objectives, ability grouping, and acceleration. Respondents need to acquire knowledge about within-in class acceleration and differentiation strategies. Without such knowledge, their ability to formulate sound cognitive beliefs about gifted learners is hindered, and classroom interaction between teachers and gifted children is impacted.

A.21 Jackie Owen. ***Exploring Profiles and Perceived Learning Needs of Undergraduate Gifted Adult Learners in Teacher Education*** **(A.21)** Current practices in educational reform include the recruitment of top students to prepare for careers in education. Top students have been described as "best of peers," "talented," and "changemakers" who have displayed these characteristics from middle school through university entrance. (Minnesota State University Moorhead, North Dakota State University & Valley City State University, 2009). These descriptors are similar to common characteristics of giftedness in both children and adults. Recruiting top students to teacher education programs may be only an initial step in bringing top students into the teaching profession. Understanding what gifted undergraduate learners need in order to maximize their learning potential during their undergraduate program may also be important for retention in teacher education and ultimately, satisfaction within the profession. Yet the needs of these gifted students may be understated or ignored by the very universities that recruited them (Rinn & Plucker, 2001). This presentation will include preliminary findings from an ongoing qualitative study of gifted teacher candidates who attended a small teachers college in the Midwest. The goal of this exploratory study is to establish a starting point for future research on undergraduate gifted adult learners, as well as identify practices that might better meet the educational needs of "everyday gifted" (Jacobson, 2000) undergraduates in general. Findings shared will include participant's perceptions of the current educational system's practices, successes and challenges with coursework, and recommendations for potential changes in practice. Information shared in this session may be generalizable to gifted populations being recruited for undergraduate programs other than education.

A.22 Diogo dos Santos Pinheiro. ***Teaching Science for the Brazilian Gifted: Challenges of a particular Experience*** **(A.22)** This paper analyzes epistemological concepts related to scientific and educational content found in a set of teaching activities, aimed at Brazilian Elementary School students who are characterized by their "gifts" in the field of natural science. The research is a qualitative one, whose methodological approach is based on reflective practitioner perspective. This perspective is based upon the notion that through taking distance/stepping back from everyday context it is possible to understand subtle aspects of practice. Research sources including teaching records used by the researcher during an exploratory stage were built and cases were reconstructed. The theoretical bases include curriculum studies, specially the school subject ones. This perspective argues that curriculum is socially constructed as historical results of disputes arising from different groups and social traditions which have attributed to the school curriculum different purposes. Further, it is considered that school subjects are materialized in school culture, generating a specific knowledge, through a complex formulation. The research elicits questions relating not only to the nature of the research itself, but also, to its initial goals. Issues identified through the narrative research process are the ones related to: (i) the nature of teacher

as a practitioner and teacher's concern in differentiated curricula situations; (ii) the influence of external events in selection of curriculum; (iii) the originally goals of scientific literacy; (iv) and the nature of a specialized educational service apart from the regular educational system. The reflections and concerns raised by the research can be shared with many teachers and researchers.

A.23 Emine Hizli; Harun Tadik. ***The Relationship between Academic Self-Efficacy and Motivation among Gifted Students*** **(A.23)** Personal beliefs and motivation are two important indicators of academic achievement among gifted students. The current study investigates the relationship between academic self-efficacy, which refers to personal beliefs of one's capability to accomplish a specific task, and motivation in a sample of middle school gifted students who are enrolled at TUZDER (Foundation of Whole Gifted Students). TUZDER is a private institution in Turkey, and offers educational materials, and weekend and after-school educational programs for gifted students. The participants completed the Turkish adapted version of Jinks-Morgan's academic self-efficacy scale and Harter's motivation scale. The self-efficacy scale measures talent, context, and effort items, and the motivation scale measures students' intrinsic and extrinsic motivations, and also includes a personal information section. The results indicated that gifted students have high level of academic self-efficacy; moreover, there is a significant correlation between academic self-efficacy and motivation of gifted students. This indicates that academically self-efficacious gifted students tend to have higher motivation than others to achieve academic tasks. Findings showed that gender and class are not statistically significant variables on self-efficacy and motivation. Implications for the further extension of academic self-efficacy to motivation research are discussed.

A.24 Fiona Pedersen; Leonie Kronborg. ***Belief and pedagogy: The Ideal and the Reality of Teachers Meeting the Learning Needs of Highly Able Students Studying Secondary Health Education in an Australian Context*** **(A.24)** The purpose of this study was to examine how teacher beliefs and pedagogy impact on the learning experiences of highly able students in secondary health education. During this qualitative investigation, an interpretive constructionist conceptual framework was employed using a collective case study approach to uncover the thoughts and actions of six secondary health teachers educating students in mixed ability classrooms. Research began with two questions pertaining to the education of highly able students in mixed ability health classes: (I) What happens when teachers are given the space to challenge beliefs and pedagogy about teaching students in their mixed ability health classes? (II) How does such reflection impact on beliefs and pedagogy when teaching highly able students in mixed ability health classes? Thoughts and actions were made visible as teachers participated in (1) two semi-structured interviews, pre and post research (2) three focus group sessions developed as a response to information revealed in the first semi-structured interview and, (3) one classroom observation. Teachers also provided artifacts related to their teaching in the form of lesson plans as well as post lesson and focus group session reflections. Collective case study methodology was employed to position six health teachers as the experts, thus providing rich data to inform the field about personal challenges and realities of meeting the learning needs of highly able students in mixed ability health classes. Findings have potential implications for the structure and implementation of professional learning for health teachers in the secondary school setting.

A.25 Graeme Miller. ***Gifted and Talented Māori and Pasifika Secondary School Boys: Their Stories of Academic Success*** **(A.25)** The literature indicates that throughout the western world students from indigenous and some other minority ethnic groups are much less likely to be identified as intellectually gifted or talented than students of European ethnicity. In the New Zealand context both New Zealand Māori and Pasifika students have been significantly under-represented in programs for the gifted and talented. Following on from the author's Masters research on perceptions of giftedness in the Cook Islands Māori community, since 2007 he has been involved in researching the stories of academic success of Māori and Pasifika boys in two state secondary schools. A draft of the thesis has been completed and is currently being fine-tuned ready for submission. The findings outline the impact of home influences, intrapersonal characteristics, schools and teachers and, chance factors on their achievement. Recommendations have been developed from these findings. Graeme Miller is in his 7th year as Dean of Advanced Learning Programs at Hamilton Boys' High School. Prior to his current position, for over 15 years he was principal of two primary schools, both with roles with over 50% of the students of Māori and/or Pasifika ethnicity. He has presented papers in the field of Māori and Pasifika achievement and published in the field.

A.26 Graeme Miller. ***Gifted Boys: How Society, Home, School and Personal Qualities Impact on Who they are and What they Become*** **(A.26)** Gifted and talented boys in the western world in the 21st century are being raised in a world of changing perceptions about what it means to be masculine. The traditionally prescribed masculine roles in society

have undergone significant changes as the roles of women in society have changed. These changes have impacted on all boys to some extent but probably the most profound impact has been on gifted and talented boys. These boys have the cognitive capacity to critique what is generally considered to be the masculine ideal, while in some cases at the same time feeling pressured to seek after it. Gifted and talented boys face important challenges in society, the family, the education system and their own personal lives. A range of interventions can assist gifted boys to develop a sense of personal identity, being secure and confident in who they are. These interventions will assist boys not only to develop their identity but also to realise their potential. This paper addresses challenges identified in the literature as well as some interventions to address the challenges. Graeme Miller is currently in his eighth year as Dean of Advanced Learning Programmes at Hamilton Boys' High School. Prior to this he was a principal and/or teacher at eight different primary schools around New Zealand. Graeme is married to Faith and they have a gifted 17 year old son (as well as three gifted daughters in their 20s). They also had a profoundly gifted teenage boy as a boarder sharing their home for 2 1/2 years. Graeme has guest lectured at university and published in the field of gifted boys.

A.27 Hanna Beisser, Loesche, Kornmann, Goellner, Zettler, Trautwein, Hasselhorn. ***Identifying Gifted Children*** **(A.27)** One of the most difficult challenges for supporting programs is to identify the gifted children in the first place, especially in programs for *intellectually* gifted children where products of giftedness are not as obvious as for instance in the artistic domain. But due to time and financial restrictions it is not possible to run individual intelligence tests for all elementary school children to reliably identify the gifted ones. Thus, supporting programs need to apply more pragmatic ways to detect gifted children. Usually, the selection or nomination is done by teachers, assuming that they should be able to identify the particularly gifted ones since they are in daily contact with the children. But research on this topic could demonstrate that the validity of teacher judgments must clearly be questioned. The goal of the current study was to analyze the ability of teachers to identify intellectually gifted children. Thereby, we focused on various variables biasing teachers' judgments. Amongst others, we found reference norm effects, meaning that high-performance students in low-performance classes were very likely to be nominated as gifted. Furthermore, we could replicate the finding that children from a low social-economic background are less likely to be nominated as gifted than children from higher socio-economic classes. Another interesting finding is that different institutions differ strongly in their proportions of correct detections of alleged gifted children. The findings allow the conclusion that it is very important to brief elementary school teachers concerning the given problems in the identification process. We suggest creating workshops that focus on exactly those problems and how to minimize them.

A.28 Hongqi Chu; Yaxing Zhang; Jinxing Sun. ***Gifted Education Policies and Practices in Mainland China*** **(A.28)** In Mainland China, the lack of gifted education law or regulations and the vagueness of existing gifted education policies have become critical factors restricting the development of gifted education. Moreover, a comprehensive system and its relevant institutions and mechanisms have not been formed in practice in Chinese gifted education. It can be seen that gifted education policies and practices in China are lagging behind many Western and Asian countries and in urgent need of strengthening. Therefore, this paper illustrates the policies and practices of Chinese gifted education over the past 30 years. More specifically, since the implementation of an "open-door" policy in 1978, there have been three main forms of gifted education in China. These include key schools and universities for high-achieving students, gifted youth classes in universities and supernormal classes in elementary and secondary schools, and an educational model for cultivating outstanding innovative talents. Compared to the policies and practices abroad, Chinese gifted education is still at the preliminary development stage. This paper points out that strengthening policies and enhancing practices should be highlighted as a pivotal way to promote the development of Chinese gifted education. Strategies for improvement are also proposed in this paper for future gifted education in China.

A.29 Jaclyn M. Chancey. ***Priority Registration, Smaller Classes, and Increased Challenge: Why Students Join University Honors Programs*** **(A.29)** Over 1000 colleges and universities in the United States have established honors programs to attract and serve high-achieving students. Even though participation in honors is voluntary, very little research has investigated why talented students choose to join these programs. In this study, honors students at two different research universities described why they joined their respective programs and completed a measure of achievement goal orientation. The results of qualitative and quantitative analyses indicated that students joined honors based on some combination of expected benefits, anticipated opportunities, and social and emotional needs. Students' reasons did reflect their achievement goal orientations; citing opportunities for challenge and growth as a reason for joining honors was positively associated with mastery-approach goals for students' college careers. Levels of performance-approach goals for the sample were significantly higher than college norms, which is consistent with existing literature

linking performance-approach goals to higher grades. Finally, honors students at the two universities placed different weights on the relative importance of benefits versus opportunities, highlighting the need to consider the influence of context when researching college honors programs and their students.

A.30 Jiri Mudrak. ***Discourses and Experiences of Being Gifted in the Czech Republic*** **(A.30)** In the paper I introduce results of a research project in which I explored various constructions of giftedness present in the Czech educational discourse and their impact on the educational development of children considered as gifted. In the Czech Republic, the construct of giftedness has been introduced in the educational system after the fall of communism in 1989. Since then, it has become a part of educational discourse which translated into educational policies and practices with an impact on education of many Czech pupils and students. The study is based on semi-structured interviews with various actors, such as participants of a Czech program for gifted, gifted children attending counseling, or young adults who were considered as gifted in their childhood. I explore the ways in which they experienced "being gifted" (including the educational and nurturing practices they were subjected to) and how this experience influenced their personal motivation and consequently the developmental paths they pursued. On the basis of the analysis I argue that two broad discourses of giftedness come into play. The first I call "a discourse of a genius," the second I call "a discourse of an agent." I show how the former is related to some unfavorable effects (such as inappropriate control and expectations or selection of too easy learning tasks) whereas the latter supports developmental conditions leading to more optimal learning experiences which support self-efficacy and setting of difficult but attainable career goals.

A.31 Sheau Yang. ***Correlational Study on Critical Thinking Disposition and skills of Grade 7 in Gifted and Talented Program in Singapore*** **(A.31)** The California Critical Thinking Skill. Test (CCTST M25, Grade 6-9) and the California Measure of Mental Motivation (CM3 II+, Grade 6-12) Test were used to assess the thinking disposition towards critical thinking of 78 Singapore Secondary One students (Grade 7) in a secondary Integrated Gifted Program. Correlationships between the thinking disposition and thinking skills are also investigated. Empirical research on critical thinking and its dispositional component is very young and has only recently started to evolve. In fact, the first tool to measure the disposition toward critical thinking— The California Critical Thinking Disposition Inventory (CCTDI) at college level (Facione and Facione, 1992; Facione *et al.,* 1994) which uses established psychological testing strategies, has just been constructed. It is based on the 1990 Delphi study expert consensus description of the ideal critical thinker (Facione, 1990) with CT as an important educational goal for the gifted and talented students. The study has the potential to explore CT beyond CT skills. Examining the correlation between Thinking Dispositions and CT skills help to predict if students will apply CT skills when needed. The findings can provide evidence to refine the current skill-focused Thinking Curriculum in order to promote an "Enculturation Model" by Tishman, Jay & Perkins (1993) that can improve the Thinking Disposition in the students. The results show that these students are somewhat disposed to thinking critically; they also demonstrated positive learning attitudes towards learning and are challenge seeking.

A.32 Gretchen Oltman. ***Violence in Student Writing: Protecting Gifted Students' Right to Write*** **(A.32)** School violence has plagued the world's headlines for many years and one response within schools has been to limit student creativity by suppressing dark and violent themes in student writing. While discouraging such writing might appease outsiders, educators who work with highly creative and emotional students know that writing is an important outlet and product. This presentation will focus on legal issues surrounding the suppression of violence in student writing in the US, threat assessment procedures to ensure student safety, and the importance of the conversation between writing teachers and school administrators regarding the importance of meaningful engagement in writing by students.

A.33 Sheyla Blumen. ***Gifted Education in an Ethno-Linguistic Diverse Society*** **(A.33)** A comprehensive portrait of the current status of gifted and talented concepts, testing, and associated provisions within Peruvian society is presented. The major purposes of this article are (a) to analyze the primary conception of giftedness in Peru; (b) to describe the beliefs that people have on gifted individuals; (c) to present the most difficult issues related to gifted and talented education that need to be addressed, and the most important contributions to gifted education made in the country; (d) to describe the most important research findings, and the future directions on research and program development; (e) to increase awareness of the impact of gifted and talented education; and (f) to encourage researchers to consider collaborating with Peruvian institutions to design effective research related to the nature and needs of the gifted and talented youth.

A.34 Sheyla Blumen. ***Mentoring and Talent Development in College Students*** **(A.34)** Significant academic relations between college students and professors might constitute a creative and enriching learning space for students, as well as

a regenerative force for professors-mentors, from the cultural relational theory and the relational practice. The present study aims to discuss new educational methodologies and evaluation processes, considering the mentoring process in the interdisciplinary and integral formation of college education. Initial results of an ongoing study based on the Grounded Theory that explores the question: What happens in the significant academic relationship between college students and their professors? Fifteen dyads of college students-professors that reported to have a "significant academic relationship" were studied. Dimensional analysis showed two basic dimensions. From the college students, the key dimension revealed the experience to "rebuild" and deeply understand theory and themselves, as well as the possibility to develop their "creative abilities" in their developing line of research. From the professors the key dimension was re-generation, experienced as a way to give back in an enriched manner, through their teaching activity and professional training. Moreover, professors reported that the experience was significant along their careers in the academic sphere. Analysis revealed data about the relationship between learning concepts and "authentic learning" among the learning dyads of college students and their professors, generating spaces for the development of creative processes on both parts. Recommendations for further studies are considered.

A.35 Sheyla Blumen; Anh-Thu Nguyen Quoc; Hyerim Oh; Catherine Wormald; Julie Maakrun; Albert Ziegler. ***The Reputation of High Achieving Students: Results of a Cross-Cultural Study*** **(A.35)** The current cross-cultural study investigates the expectations of students in relation to highly achieving peers in Australia (N=600), Korea (N=600), Peru (N=600) and Vietnam (N=600). Students were asked to indicate their expectations about a fictitious new classmate with respect to three categories: intelligence, social competence, and eagerness. Besides cultural effects, differences concerning the gender of the participating students, the gender of the target students (fictitious highly achieving students), and interaction effects were investigated. Whereas the effects of gender and target gender are inconsistent and negligible, there are significant cultural differences. Vietnamese and Korean students hold the most positive expectations about successful peers. The results are discussed with regard to possible explanations and educational consequences.

A.36 Shin-Dong Lee; Woon-Jung Koh; Ki-Myung Kim. ***The Structural Model Analysis of Related Variables on English Reading Comprehension Ability of Gifted Students*** **(A.36)** The purpose of this study was to reveal the path structure of related variables of Korean gifted students' English reading comprehension ability, English vocabulary & grammar knowledge, Korean reading comprehension ability, metacognitive awareness of reading strategies, and parents' educational support. The subjects of this study were 110 gifted elementary school students in the fifth and sixth grades, 130 gifted middle school students in the first and second grades, and their parents, who were all from the 3 different gifted education centers. The collected data was analyzed with SPSS 16.0 and AMOS 16.0 for conducting path analysis. The path model carried out a path analysis in AMOS 16.0, then tested the statistical significance of each regression weight for finding fit between real material and the path model to a significant level .05. After verification of model fit, direct and indirect effects of all variables on English reading ability of Korean gifted students were investigated and analyzed. The results of this research are summarized as follows: First, the results of analyzing the goodness of fit of research model showed an acceptable fit to the present data, however the results were not as satisfactory as expected. Second, the results of examining the direction and significance of path coefficients among related variables of the research model showed that some variables exerted significant effects in positive(+) directions. Third, the results of examining causal relationships among related variables of the research model showed that there were some significant positive(+) effects among all variables in direct, indirect, and total effects.

A.37 Michele Kane; Ellen D. Fiedler. ***Changing Family Structures: Helping Gifted Families Find their Way*** **(A.37)** Parenting gifted children is most demanding in terms of time, energy and intensity. Additional challenges are created by changing family structures, that are becoming commonplace worldwide. Parents of gifted children are often ill equipped to deal with the demands they face in today's increasingly complex situations, including those found in non-traditional family constellations. Sensitivities and intensities converge at every developmental stage, and asynchrony adds to the complexity. Therefore, life in the gifted family can be a difficult journey without any clear roadmap to follow. Complicating daily interactions for gifted children and their parents are the reactions of others when they discover that some children are being raised in non-traditional families, oftentimes resulting in factors such as giftedness being ignored. Furthermore, dealing with life-changing situations over which a child has no control, such as divorce, moving, parent illness, death within the family, and more, can become additional challenges adding to the complexity of life within the gifted family. This interactive session focuses on the wide range of family structures found in today's world and offers guidance in addressing the plethora of issues that arise. As a result of participating in this session, parents and teachers develop understanding of the implications of the change process related to gifted issues/concerns and are

provided support and resource suggestions applicable to those affected. Practical strategies for addressing changes in gifted families are included, along with suggestions to support the social and emotional needs of all involved and ideas about how to respond in difficult situations.

B.3 Kathy Stone. ***International Test Results Celebrate Giftedness*** **(B.3)** Giftedness can be celebrated through international test results. In political discourse and the news media, worldwide test comparisons and rankings generally refer to the OECD testing program of PISA (Program of International Student Achievement), administered globally to 15 year old students. Achievement in grades 4 and 8 are documented through the testing programs of TIMSS (Trends in Mathematics and Science Study) and PIRLS (Program in Reading Language Study). There was a unique opportunity in 2011 with the alignment of the TIMSS and PIRLS testing cycles, providing concurrent transnational results in math, science and literacy. Advanced achievement scores include total mean, ranking, and sub-score data based on 90th percentile and gender distribution, as well as international benchmarks and proficiency levels. Results for TIMSS and PIRLS provide valuable data interpretation in content and cognitive sub-scores, which can become a curriculum resource for promoting content balance, which would best align with international standards. This presentation provides an overview of the 2011 TIMSS and PIRLS and PISA 2009 test results across countries, with emphasis on sub-scores related to advanced achievement and gender disparity. High achievement in TIMSS and PIRLS can suggest the potential to predict PISA test results that generate subsequent power to support policy valuing advanced achievement. An in-depth analysis of TIMSS 2011 Math scores will be used to compare a representative sample of European and Asian countries, and illustrate the rich evidence in sub-score data available to promote discourse celebrating giftedness through advancing international achievement.

B.4 Katie Larsen McClarty. ***Crossing the Finish Line: Effect of Grade Acceleration on College Outcomes*** **(B.4)** Research has repeatedly demonstrated positive outcomes for students who skip a grade in terms of achievement test scores and social emotional outcomes (e.g., Kulik & Kulik, 1992; Rogers, 1992). This study expands prior research by evaluating the impact of grade acceleration prior to high school on subsequent college outcomes. Using a representative national sample (the National Educational Longitudinal Study), we first examined how accelerated students performed on college readiness and college outcomes relative to their (new) grade-level peers. Second, we employed coarsened exact matching (CEM; Iacus, King, & Porro, 2008) to compare how accelerated students performed on those outcomes relative to peers with similar academic and demographic backgrounds. Results showed that relative to their 8th grade peers, students accelerated prior to grade 8 had higher PSAT scores, high school grade point averages (GPAs), SAT scores (math and verbal), ACT scores (composite and subject area), and undergraduate college GPAs (including GPAs in math and science). Accelerated 8th graders were also more likely than their peers to attend highly-selective or selective colleges rather than open-door or non-selective colleges. These results hold whether accelerated students are identified by survey response or by age (i.e., being two-years younger than their peers). When accelerated students were matched to non-accelerated students in terms of 8th grade achievement, gender, and race, accelerated students still had better college outcomes such as higher high school GPAs, undergraduate GPAs, and attendance at selective and highly-selective institutions. Results suggest that the positive effects of acceleration last beyond K-12 schooling.

B.5 Abdulkadir Bahar; C. June Maker. ***Understanding the Cognitive Backgrounds of Mathematical Problem Solving*** **(B.5)** No one would deny that humans are social beings who encounter a variety of problems in everyday life. We may not be able to solve every kind of problem, but, as human beings, we have the capacity to devise strategies and procedures to approach problems (Willats, 1990). Problem solving has been a core theme in education for several decades. Educators and policy makers agree on the importance of the role of problem solving skills for school and real life success. In this session, I will present my study in which I explore the influences of cognitive abilities including intelligence, creativity, memory, knowledge, reading ability, verbal ability, spatial ability, and quantitative ability on the mathematical problem solving performance. I investigate the relationship between cognitive abilities and problem solving performance by separating performance in open-ended and closed situations. The findings help to extend the current research on student thought processes. The knowledge about characterization of students' thinking might provide teachers with a plan to implement problem solving-based teaching in classrooms. The findings can be applied to the development of teaching methods and materials to be used in future mathematical problem solving classes to facilitate the development of students' abilities and skills for solving open-ended and closed problems.

B.6 Adrienne E. Sauder. ***Examining Gifted Adults' Perceptions of Success and Failure Throughout their Education*** **(B.6)** Attributions of success and failure (Weiner, 1972) are critical components for understanding academic achievement in

gifted individuals. This paper is based on insights gained from a phenomenological study investigating gifted adults' perceptions of giftedness and its influence on their pursuit of graduate education. In particular, this paper will explore gifted adults' lived experience of academic success and failure through all levels of their education, from elementary school to graduate school. Gifted individuals identified a difference between the common or standard definition of success/failure and their own personal definition of success/failure. In order to explain how and why this difference in definitions of success/failure influenced attributions in different situations, the concept of *degrees of failure* was developed. Degrees of failure relate an individual's definition of success/failure to the valuation and personal relevance of the task. As a result, the perceived degree of failure impacts the causal attributions gifted individuals apply to their success and failures.

B.7 Adrienne E. Sauder. ***How Dare I? A Gifted Adult's Autoethnographic Exploration of Experiences of Stigma in Education*** **(B.7)** Research shows that being labelled as gifted has both a positive and negative impact on how children perceive themselves and the attitudes of others towards them (Berlin, 2009). Phenomenological research focuses on insider perspectives of a specific phenomenon as it is lived and experienced, through exploring and examining the complexity surrounding "people's perceptions, perspectives, and understandings of a particular situation" (Leedy & Ormrod, 2005, p. 139). This study explores experiences of stigma surrounding giftedness throughout the author's educational career – from elementary school to graduate school. Examining one's own lived experiences using ethnographic methods "with the intent of understanding self and its connection to others" (Chang, 2008) within a sociocultural context helps shed light on how perceptions of giftedness and stigma influence personal, academic, and vocational development.

B.8 Anamaria Vladut; Sabrina Strasser; Wolfgang Pfeiffer; Albert Ziegler. ***The Development of High Abilities: The Role of Educational and Learning Capital*** **(B.8)** In this presentation we approach the development of high abilities under the aspects of adaptation and regulation. Based on the Actiotope Model of Giftedness it is proposed that their development can be better understood as the acquisition of functional action repertoires in talent domains. Two types of regulation are distinguished, homeostatic and allostatic regulation, followed by replies to two central questions: Who regulates and what exactly is regulated? Here endogenous and exogenous resources are discussed and the concepts 'educational capital' and 'learning capital' are introduced. Attention to four principles is recommended: 1) The principle of the co-evolution of the components of the actiotope, 2) the principle of dynamic-interactive regulation, 3) the principle of capital orientation, and 4) the constructivist, or learning-pathway principle. This is confirmed with two studies conducted with high achieving pupils in grades 9 through 12 (N=205) and a study with internationally renowned musicians (N=55) using the expert-novice paradigm.

B.9 Catherine Zakoian. ***Saints, Madmen, Hogwarts and Beyond: Creative Education and Support for the Young Gifted Mystic*** **(B.9)** This individual talk presents advocacy, counseling and teaching work supporting gifted young people drawn to explore and understand the mystical questions and facets of human existence. Focusing on counseling approaches and courses of study designed by the presenter to meet client and student interests and needs and to provide growth, healing and a strengthened sense of self. Presentation contents include: client and student-driven development of intervention and curriculum; finding and building collaborative relationships with participating community partners; creating and maintaining a safe experiential counseling or educational container; discussion of some of the relevant dynamics of human mysticism, trauma, addicted family systems and healing; student and community partner testimonial and reflection on the relationships between substance use, self-medication, mysticism and giftedness.

B.10 Donna Y Ford; Michelle Trotman Scott. ***Multicultural Gifted Education: Developing Rigorous and Culturally Responsive Curriculum*** **(B.10)** Based on the first author's work in gifted education, the presenters provide a rationale for why gifted education must be multicultural or culturally responsive. Based on Bloom's Taxonomy (revised) and James Banks' model of how to infuse multicultural content into the curriculum, the authors present the Ford-Harris (aka Bloom-Banks) Matrix. The Matrix helps educators to ensure that lesson plans are both rigorous and culturally responsive. Several matrices are shared at all grade levels and in several content areas. Resources are provided. The session is minds on and hands on.

B.11 Kornelia Tischler; Samo Wakounig; Horst Kanzian. ***Motivational Orientation Development of High Achieving Students at a Vocational College*** **(B.11)** In 2011 a specialized class for high achieving students was implemented at an Austrian technical vocational college for the first time. The 6-year longitudinal study investigates the development

of personal factors, self-beliefs, classroom context, motivation and many others. This presentation focuses on the growth of achievement goals of students in the specialized class in comparison to those in regular classes. According to Nicholls (1984), Spinath a. o. (2000) three types of achievement goals (i.e., task/learning goal, performance-approach goal, performance-avoidance goal) and work avoidance have been measured by SELLMO, an adapted and extended version of the "Motivational Orientation Scale". Two hundred and thirty-five students (54 in high achieving classes, 181 in regular classes) have been taking part in this investigation since the beginning of grade 9. One of our hypotheses is: Learning goals increase whereas performance goals and work avoidance decrease more in the specialized class than in control groups. After two years of inquiry and research, preliminary findings partly verify our thesis: Task orientation of the students in the specialized class was increasing at the beginning of grade 9 and since then it has been decreasing, whereas in one of the control classes it has been increasing since then. Task orientation and work avoidance have been decreasing constantly only within the specialized class. In-depth analysis of data and implications for theory and practice are discussed in the presentation.

B.12 Lamont A. Flowers; James L. Moore III. ***Exploring the Relationship between Academic and Career Orientations of High-Ability African American College Students*** **(B.12)** A mixed methods research approach was utilized to examine the relationship between academic and career orientations among high-ability African American college students majoring in science, technology, engineering, and mathematics (STEM) at two historically Black colleges and universities. The findings suggest that high-ability African American students may need support to enhance their career self-efficacy and academic commitment. Implications for practice will describe what secondary and postsecondary professionals can do to enhance STEM students' career development.

B.13 Laurie J. Croft. ***Adolescents' Perceptions of Teacher Effectiveness*** **(B.13)** What do talented adolescents say about their most influential teachers? Research has shown that "the teacher—more than any other factor—has the greatest influence on student achievement" (Flynt and Brozo, 2009). Individual adolescents were nominated as outstanding in a specific content area for a prestigious summer program; expert panels reviewed all applications to select the best of the best for classes including advanced science, mathematics, the social sciences, global/cultural studies, creative writing, invention/innovation, visual arts, and performing arts. The students who were selected for participation were invited to a Recognition Ceremony and were asked to share comments about their most influential teachers. Although models of teacher efficacy in the United States increasingly rely on student outcomes on standardized instruments as the measure of teacher, as well as student, success, some scholars recognize the value of student perceptions of effective teachers and classrooms; the Tripod Project for School Improvement (Learning about Teaching, 2010) identified seven constructs—the "Seven C's" (Care, Control, Clarify, Challenge, Captivate, Confer, and Consolidate)—designed to capture student perceptions about effective general education classroom environments (Tripod Project, 2012). Their constructs are typically assessed through survey items, but student comments about teachers important in their lives suggest teacher behaviors and climates important to gifted adolescents in differing fields of talent development. The themes that emerge from content analysis are compared with the Seven C's, and they emphasize constructs that are more—and less—significant to these talented students' success.

B.14 Maha Hassan Fasi. ***Gifted and Talented Education in Kingdom of Saudi Arabia*** **(B.14)** The Gifted and talented students are the wealth of the country, and the task force that contribute to the growth and development of every society. Recently, Saudi Arabia is interested in gifted education. This presentation will shed light on the latest developments relating to gifted programs in this country. Gifted programs in Saudi Arabia includes: Summer programs, special schools for the gifted, enrichment programs, and Olympiads.

B.15 Manuel Rodriguez. ***PAENFTS: Pioneering Experience in Peru*** **(B.15)** From a legal perspective, organizational and policy, the PAENFTS is expressed as a response of the Peruvian state, consistent with the Principles of Equity in Education, to provide opportunities for the population with special educational needs related to talent and giftedness. What underpin their work? It is based on the application of extracurricular enrichment programs intended to develop the potential of this population of students. Gifted children need learning challenges that are beyond the curriculum in the educational institution, and this may offer improvements Enrichment Programs. The theoretical framework on which is based the work of identifying and educational services of the institution is based on the theoretical model of the Three Rings proposed by researcher Joseph Renzulli. Moreover, we incorporate the theoretical proposals Triadic Interdependence Model F. Monks The pedagogical approach that is developed at our institution seeks to achieve a profile of children. Develop programs that train students in the mechanisms and procedures of the thought The

program is organized in 14 Development Areas. "Everyone has a specific vocation or mission in life, every person must carry out their specific design requiring compliance. Therefore, it is irreplaceable and unrepeatable life. Thus, the task of every person is unique, and the specific opportunity to do it, Enrichment Program has been based on three theories: The theory of intelligence, The theory of training, The theory of creativity.

B.16 Maria Guadalupe Simón Ramos; Rosa María Farfán Márquez. *Gender and Gifted in Mathematics* (B.16) The results of analysis from the gender perspective suggest that the social interactions and knowledge of many girls contribute to their self-perception of ability, and have a strong influence on girls' choices during childhood and adolescence. This fact affects considerably their achievement, actions, and aspirations at school. This research analyzes the role of socio-cultural factors and mathematic knowledge in the development of giftedness in female teenagers, and the influence they have in the growth of mathematical knowledge. The socio-epistemological theory which considers the epistemological, the cognitive, the social, and the didactic aspects at the construction of mathematical knowledge permit us to consider environments of action in which female students have better opportunities to show their capacities and to offer feedback regarding their self-perception of giftedness. We present an example from a study that we did with female students from a social program in México City, that follows the development of scientific capacities in girls and boys that show high abilities in science and mathematics. We analyze the socio-cultural influences of gifted development in mathematics in girls from different contexts: the familiar, social, scholastic and in their study of mathematics.

B.17 Michelle Bannister-Tyrrell. *The Unschooled Mind: Metacognition and Gifted and Talented Students* (B.17) Gifted and talented students come to school with advanced and unschooled metacognitive abilities that allow them to progress through curriculum content and master skills, strategies and concepts at an advanced rate compared with their same age peers. Understanding metacognition can give teachers insight into cognitive and affective elements that both promote and hinder learning in their students, including gifted underachievers. This presentation will dispel some of the misunderstandings that surround metacognition and show how higher order and critical thinking, reflection, motivation, self-efficacy and self-awareness are essential elements of metacognition, and in turn the learning programs of gifted students. The presentation will present both theoretical and practical support for classroom teachers and researchers based on Tarricone's (2011) Taxonomy of Metacognition and research studies focusing on identification of metacognition in gifted populations.

B.18 Michelle Rogers. *Using Appropriate norms to Increase Diversity in Gifted and Talented Education Programs* (B.18) While a significant amount of attention has been devoted to the importance of increasing minority student access to gifted and talent education (GATE) programs, inequitable representation of such groups still remain. Numerous 'best practices' have been proposed by researchers to assist practitioners in identifying academically talented minority students. However, a large proportion of the published literature on best practices in GATE identification has been theoretical in nature rather than empirical. More empirical studies are needed to evaluate the effectiveness of proposed procedures for increasing representation of traditionally underserved students. Given the heterogeneous experiences and backgrounds of academically talented students, some researchers have argued for using within group comparisons for GATE selection. Lohman (2009) maintains that making more focused group comparisons among students with similar opportunities to learn will result in effectively identifying minority students with high potential. In his article, he demonstrates how to simultaneously use local, national, and subgroup norms during the GATE selection process. This study will be an extension of that demonstration. Standardization data from the Cognitive Abilities Test will be analyzed to examine how the use of different norm comparisons impacts the odds of ethnically, economically, and linguistically diverse students being selected into the gifted program. A logistic model regression will be fitted to estimate the probability of selection into the GATE program when various reference groups are used. These results will be compared to the odds of selection into the GATE program when a common cut-score is used.

B.19 Mo Yazdi. *Math & Science: Smart Students Versus Intelligent Students* (B.19) In this presentation, initially the two terms *smart* and *intelligent* are defined comparable to the terms *slow and fast systems of thinking* (by Daniel Kahneman, the 2002 Nobel Laureate in economics for his work on decision making) and *fixed mindset vs. grow mindset* (by the prominent psychologist Carol Dweck of Stanford University). The presenter then, tapping into his 25 years of teaching experience with all ages from elementary up to college students (including six years of teaching medical students), outlines the characteristics of students who are merely *smart* and students who are also *intelligent*. The overlapping characteristics and how much of these traits are hereditary or are learned, and whether they are interchangeable will be discussed. The presenter shares strategies with his audience on how to recognize these traits from early on and how

to help students, parents and their teachers build effective strategies that can be placed upon the gifted students on the road to success; particularly in the two important subjects of math and science (a slide presentation show is available upon request).

B.20 Mojca Jurisevic. ***Gifted Students' Attitudes towards Their Giftedness and Education in the School Context*** **(B.20)** There are a number of studies that have explored the attitudes towards giftedness and gifted students; however, the research findings are unclear and ambiguous. Thus the self-perception of gifted students regarding their gifted status in the school was determined and compared with the attitudes towards giftedness and gifted education of their non-gifted peers, teachers, and parents. Altogether 1936 elementary school students (26% identified as gifted) and 990 secondary school students (50% identified as gifted) as well as their teachers (N = 1484) and parents (N = 1960) participated in a national survey in which the main purpose was to identify the social cognitions of the gifted students in their school context. The results show that gifted students have a strong need to be treated the same as their peers in school (i.e. they do not want to be something special, but they want to do something special). Additionally, the results illustrate that the Slovenian school context holds relatively positive attitudes towards giftedness and gifted education, and that the positive orientation in attitudes is linear to the amount of positive past experiences and professional knowledge. According to the research findings, a model of promoting gifted education is proposed. Model PGE relies on a systemic approach for the development of the positive attitudes that have a strong diagnostic and prognostic value on the effectiveness of gifted education in a particular school context.

B.21 Mojca Jurisevic; Janez Vogrinc. ***Self-Perception of Gifted Students: International Comparison Based on Qualitative Research*** **(B.21)** In this paper the authors reflect on some of the key issues of gifted students regarding their understanding of giftedness and the support they experience in the educational context. The study is based on a set of semi-structured interviews with the participants of the International Summer Camp for Gifted Youth and aims to explain the basic motivational dynamics of the gifted students. The interviews lead us to pay attention to: (1) implicit theories of gifted students about their giftedness, (2) gifted students' perception of the school strengths and shortcomings to gifted education, (3), gifted students' perception of teachers' support to their learning in school, and (4) gifted students' career orientation. From the interpretative analysis of the data collected we can conclude that gifted students do not perceive themselves as highly gifted in the first place, but highlight a variety of their interests, hard work and perseverance on the problems they are confronted with regardless of the particularities of the broader context of the country from which they come. Secondly, the experiences of the gifted students participating in the study may lead to the conclusion that it is the competent teacher who matters most in realizing their giftedness.

B.22 Nazmiye Nazli Ozdemir. ***The Investigation of Relationship of Creative Scientific Ability's Subtests with Each Other*** **(B.22)** The purpose of this study is to investigate the relationship of subtests of Creative Ability Test (C-SAT) (i.e., hypothesis generation, experiment space and evidence evaluation) with each other. The C-SAT contains 5 items, measures fluency, flexibility and Creativity Quotient (CQ) in hypothesis generation, experiment design and evidence evaluation in five areas of science. Hypothesis generation is a sort of problem solving. Experiment space is testing the hypothesis. Evidence evaluation is the process of determining whether evidence obtained from experiments is sufficient to accept or reject hypotheses. Therefore, it is expected that these are all related to each other. In this study, regression analysis was done to predict the total score of the experiment space and evidence evaluation from hypothesis generation. In addition to this, regression equation was calculated to predict the total score of hypothesis generation and evidence evaluation from experiment space. Finally, regression analysis was done for predicting the total score of the hypothesis generation and experiment space from evidence evaluation. The participants included 704 sixth grade students who applied for Education Programs for Talented Students (EPTS) in 2011 and 2012. The results of this study will be shared in detail with the participants at the conference.

B.23 Ngarmmars Kasemset; Pichak Siripoonsap. ***One-day Talent Development Program: A Supplementary Hualaem Program in Normal Thai School System*** **(B.23)** Gifted and Talented Foundation (TGT) Thailand has provisions for special programs and classes for gifted students in the major schools in all provinces. In addition to these targeted students, there are also children with high potential and abilities in other schools, classes, and provinces. TGT Foundation works with schools and introduces a one-day workshop for bright (Hualaem) students. The program invites students with high potential in grade 4-6, 7-9, and 10-12 from different schools and districts to participate. It is held in a host school and moves from one province to another throughout the school year. In this one-day workshop, students meet peers from various schools and districts. They learn the concepts of body and mind (heart & soul); dual systems

of mind and brain; and three-layered (surface to depth) learning. They realize emotions are manageable. They discover how to enhance potential and abilities. They interact with each other and increase confidence and communication skills. They join brainstorming sessions. They work as a team. Each member performs to his/her best abilities. They are challenged with tasks that need to be done within a limited time. Warmth and friendship are shared with friends they just met. Since July 2011 till February 2013, TGT Foundation has provided opportunities for 6000+ children and youth from 60 provinces to participate and learn from this Talent Development program.

B.24 Nielsen Pereira; Marcia Gentry. ***A Qualitative Inquiry into the Experiences of High-Potential Hispanic English Language Learners in Midwestern Schools*** **(B.24)** The underrepresentation of English language learners (ELLs) in gifted programs remains a severe and pervasive problem. Few studies exist, however, concerning the educational experiences of high-potential ELLs. This study focused on Hispanic ELLs in grades 2 through 6 from four Midwestern schools. Twenty-two students, twenty parents, and twenty-two teachers were interviewed to gain a better understanding of the students' schooling experiences. Students revealed that overall they enjoyed school, had positive interactions with peers and teachers, and were committed to doing well in school. Results of this study also revealed that the participants were well integrated in their schools. This study adds to the limited research concerning high-potential Hispanic ELLs and provides insights into these students' educational experiences, highlighting the need to focus on their strengths rather than on their deficits. It emphasizes the need to identify high potential students from underserved populations for gifted education services.

B.25 Nina Krueger; Soeren Fiedler. ***General and Gender Specific Changes in Mathematical Performances of Mathematically Highly Talented Children – A Comparison of Decades*** **(B.25)** The present study compares differences in mathematical performances assessed with the German Scholastic Aptitude Test-Mathematics (GSAT-M) and the Hamburger Test of Mathematical Creativity and Giftedness (Hamburger Test fuer Mathematische Begabungen, HTMB), two well-proven measuring instruments for mathematical giftedness, with regard to gender and time period of testing. In the scope of the "Talentsuche Mathematik" around 200 sixth graders from three federal states of Germany have been assessed annually since 1983. Approximately the top 25% of the tested students afterwards participate in the encouragement program for mathematically gifted children (Hamburger Model, Kießwetter/ Wieczerkowski). Data from two decades, the eighties and the post-millennial years, are compared in both mathematical tests. Analyses of variances revealed that in the post-millennial years participants achieved lower point values for both the GSAT-M and the HTMB. This result might be explained by cultural as well as by developmental approaches. Regarding gender and time period of testing, in the eighties boys reached significantly higher point values for the GSAT-M, but not for the HTMB compared to girls. In the post-millennial years the pattern of results remained stable with regard to the GSAT-M. However, girls now achieved significantly higher point values for the HTMB as compared to the boys. Examining (potential) gender differences in mathematical performances of highly talented children is highly relevant to the current gender discussion and helps describing the present situation of gender specific developments.

B.26 Nor Sakinah Mohamad; Noriah Mohd Ishak. ***Understanding the Systems of Teaching and Learning Mathematics for Performance Improvement Among Gifted Students*** **(B.26)** The systems of teaching and learning mathematics are complex and relevant literature shows that many innovations implemented in the classrooms fail. The failures result from an overly simple approach or focus on one aspect of teaching and learning only, non-alignment between direction and implementation, and an inability to match the right solution to the problems faced. All these problems happen because performance problems are not understood fully. To address this problem, case studies from the School Holiday Program among the gifted and talented students at PERMATApintar National Gifted Center were collected and then analyzed using continuous comparison method. Findings from this study suggest that in order to overcome the problem of performance in teaching and learning mathematics, it is important to see and understand in depth the systems of teaching and learning mathematics as a whole. Therefore, a systematic process to understand performance problems fully needs to employ a comprehensive framework.

B.27 Önder Tombuş; Ayşe Cilacı Tombuş; Umit Davaslıgil; Serap Emir. ***The Investigation of the Effect of a Differentiated Program in Different Clustered Student Groups*** **(B.27)** In this study, based on the research data by Davaslıgil and Emir obtained from 4th grade bright and gifted students attending a primary school established in Turkey for orphan children, students are clustered according to their test scores in Raven's SPM Plus, Davaslıgils's Thinking Skills Test, Urbans and Jellen's test for Creative Thinking - Drawing Production (TCT-DP), School College and Ability Test (SCAT) EQi tests by using data mining techniques. After two years of a differentiated program, the improvement of bright and

gifted students is investigated. The effect of the program will be considered separately for each clustered student group. Furthermore students will be reclustered according to their test results after two years of differentiated education and the movement of students from previous clusters to new clusters will be investigated.

B.28 Onur Agaoglu. ***Job Satisfaction of Administrators & Teachers in the Science & Arts Centres in Türkiye*** **(B.28)** This study is on job satisfaction levels of administrators and teachers in the Science and Arts Centres (the SACs). It seeks to answer the question if there is a significant difference between the attitudes of administrators and teachers in the SACs about job satisfaction factors. These factors are the job and its value, salary, administration and evaluation, opportunities of self-development and promotion, organizational setting; and the gender, age, educational background, and professional experience. The study reflects on working behaviours of administrators and teachers, such as lowness in motivation and performance. It traces the causes and effects of these attitudes, and aims to contribute to human resources administration and development. The research sample is composed of administrators and teachers working at 25 SACs. Total number of participants is 235; 40 as administrators and 195 as teachers. As the data collection method, a scale is developed to define the job satisfaction levels of participants. 34 items are included in this job satisfaction scale. SPSS is used for the data analysis. As a result, job satisfaction of male administrators and teachers are at a higher level compared to job satisfaction of female administrators and teachers. Results reveal that job satisfaction does not differentiate distinctively in its value, salary, opportunities of self-development and promotion, as well as organizational setting in terms of the age, gender, professional experience and educational background factors.

B.29 Richard M. Cash. ***Developing Promotion Strategies for Self-Regulation: Critical Skills for Underrepresented Students' Success in Gifted Programs*** **(B.29)** Regulatory focus theory (Higgins, 1997) suggests two orientations of self-regulation. Self-regulation, the skills used to achieve success, is oriented toward facing challenges (promotion) or avoiding failure (prevention). Students with promotion orientation approach tasks with confidence to succeed, even in the face of obstacles and setbacks. Those oriented toward prevention approach tasks from a doubt perspective and are more likely to give up easily. Therefore, students with promotional attributes are more likely to gain in achievement and manifest their talents (Higgins & Spiegel, 2004). Students from diverse and economically disadvantage backgrounds may be underrepresented in gifted programs based on their lack of promotion strategies for self-regulation, or their excessive use of avoidance strategies acquired during previous experiences. The possession of prevention orientation can be attributed to historic, generational or cultural influences. The social context of most Euro-centric groups is that of independence, which leads to promotion orientation. In many non-Western cultural groups there exists interdependence, which leads to a prevention orientation (Barab & Plucker, 2002; Kurman & Hui, 2011). Using the promotional orientation and the growth mindset (Dweck, 1999) theories this session will present specific strategies and techniques to develop students' self-regulation through competence, confidence and success attainment. The presenter will frame promotion orientation and growth mindset theories to provide techniques for teaching self-regulation strategies of achievement. Additionally, participants will receive effective methods for supporting diverse students in gifted programs.

B.30 Richard M. Cash. ***Differentiation for the Gifted through Disciplined Inquiry*** **(B.30)** A highly effective technique of differentiating for gifted students is through the method of disciplined inquiry. *"Disciplined inquiry* is defined as a systematic and reflective pursuit of knowledge" (Hiles, 1999). Disciplined inquiry weds the skills, strategies and mindset of critical reasoning to engage in complex learning experiences. This student-centered process compels students to invest in building knowledge and acquiring new skills through the activation of their interests. The nature of disciplined inquiry requires learning to extend beyond the four-walls of the classroom to the creation of authentic productions. Through the disciplined inquiry approach students pursue topics of interest; frame meaningful questions; unearth assumptions or beliefs; consider strategies for research; collect pertinent data; analyze and interpret data; and present findings to support claims. Disciplined inquiry links abstract concepts (depth) through such critical essential questioning formats such as: "What is the cost of interdependence?" or "In what ways are we destined to powerlessness?" Inquiry, in general, is a messy process, as it is active and requires the students to use multiple resources, often out of the purview of the general curriculum. For gifted youth, they learn to utilize their deep interests, pursue meaningful questions, and create authentic products that have value to others, all while honing advanced skills of self-regulation. This session will show participants how to construct disciplined inquiry activities, and offers specific strategies for deepening content to engage students in complex thinking.

B.31 Soha R. Elzalabany. ***Gifted and Talented Education in Egypt: A Teacher's Perspective*** **(B.31)**This study briefly focuses on the history of the Gifted and Talented (GT) education in Egypt and describes the current situation in the

Science Technology Engineering and Mathematics (STEM) School as a direct attempt to raise the benchmark in the quality of education for highly-achieving students. The study attempts to give a qualitative account of the current situation of the GT in Egypt, its limitations and the future suggestions for the country's welfare. It emphasizes the urgent need for developing a clear definition and a set of policies and procedures to promote for GT in Egypt. Finally, a teacher's initiative catering for the GT students, in an American international school in Egypt, will be described. It suggests different methods to accommodate the GT students in mainstream education, paving the way for educators and administrators to follow.

B.32 Sook Hee Park; Sol Kim; Kyoung Hoon Lew. ***Comparison of Perfectionism Tendency between a Gifted and a General High School in Korea*** **(B.32)** The purpose of this study is to inquire whether Korea's gifted students are more inclined to be perfectionistic than the general students. To approach this, Hewitt & Flett (1991)'s Multidimensional Perfectionism Scale(MPS) was conducted on 241 first and second year high school students at a Korean private school for gifted students and a general school; also the mean, and standard deviation was calculated and t-test was performed. As a result, the students attending the private school showed a significantly higher scale than those attending the general school (t=2.67, p<.01). Furthermore, when the scale was verified after distinguishing the students by both grades and types of schools, no significant difference was shown in the group of first year students at both types of schools whereas a significant difference was shown in the group of second year students in 'self-directed perfectionism' dimension (t=2.18, p<.05). Synthesizing the results from this study, second year students attending a private school for gifted students have more tendency to demonstrate higher scale of self-directed perfectionism than those attending a general school.

B.33 Stanford O. Amos; Donna Y. Ford. ***Saving Our Sons: Supporting Gifted Black Males*** **(B.33)** Gifted Black males are woefully underrepresented in gifted education. They are more underrepresented than any other group in the U.S. And a few reports that Black males in other countries are also invisible in gifted education. This session focuses on effective and equitable ways to both recruit and retain Black males in gifted education. Case studies of several gifted Black males are shared to shed light on how educators can better understand, support and increase the participation of Black males in gifted education. Some of the males were identified as gifted; some were not but should have been. The strategies to reverse/eliminate underrepresentation are grounded in two separate yet related areas: (1) recruitment and (2) retention. The presenters not only focus on case studies of Black males, but also problematic and promising criteria, instruments, and policies. Equity is the theme of this session.

B.34 Sum Chuen Vincent Chan. ***Applications to Enhance Students' Ability of Mathematical Reasoning*** **(B.34)** To highlight the importance and the way to incorporate Gifted Education elements for the whole class in a regular mathematics lesson. Some examples from Primary to Secondary schools on how high-order thinking and creativity could be included in a regular mathematics lesson: to maximize participation of gifted students and cater for the needs of others to expand students' understanding of mathematics through cultural elements and authentic applications to enhance students' ability of mathematical reasoning

B.35 Susan Luus. ***Self-Presentation and Underachievement in Gifted Early Adolescents*** **(B.35)** Academically gifted students are recognized as possessing considerable achievement potential. Yet many gifted students fail to perform at a level commensurate with their ability. This phenomenon is known as underachievement and may have far-reaching personal and social costs. Underachievement is particularly prevalent during early adolescence, between the ages of 10 to 14 years, when declining levels of academic achievement are often apparent. This developmental phase of early adolescence often coincides with students in the middle grades of their schooling. For some gifted students, the *forced-choice dilemma*, which arises from the inability to satisfy simultaneously their need for achievement and friendship, can result in an apparent deliberate choice to underachieve. This may render them population of learners at-risk. The choice to underachieve or to avoid achievement leads to the adoption of self-presentation strategies, which enable the student to mask ability. The results of a recent multiple case study identifies a range of self-presentation used by gifted students to avoid achievement. Recognition of self-presentation strategies may assist educators and parents to provide greater support for gifted adolescents and limit the development of underachieving behaviors. This session is aimed at middle school teachers, counselors/guidance officers, and parents. It is intended to assist these stakeholders to identify a range of self-presentation strategies utilized by gifted adolescents to avoid achievement. Arising from the interaction of the gifted student's sense of fit with their learning environment, these strategies have implications for self-actualization and fulfillment of potential.

B.36 Susanne Dodillet. ***Swedish Excellence Programs – Where they Came From, What they are and Why they are at Risk*** **(B.36)** In view of expanding globalization, worldwide competition and economic crisis gifted and talented education is increasingly promoted as a means to secure any society´s competitive strength. In Sweden, a country with a social democratic and egalitarian tradition, giftedness and talented education were long seen as taboo. In 2009, however, advanced placement tracks for theoretical subjects were also introduced in Swedish schools. Since then The Swedish National Agency for Education has elected twenty schools to provide excellence programs in cooperation with a university. Although the introduction of these programs was associated with a costly application system, the Swedish government gave scant reasons for introducing these programs. Their purpose and possible benefits seem to be undetected or ignored by the population. Several of the elected programs struggle with chronic bad application rates or have since ceased to exist. This paper examines the motives behind these programmes and shows who or what influenced their introduction. It then describes their character and discusses how their structure corresponds to the intentions from which they were created. Finally, this paper investigates whether the long taboo surrounding giftedness described above is the only reason for the low interest of the population in this reform. In a wider perspective this paper illustrates the difficulties encountered when international trends are transferred into local cultures.

B.37 Daniela Vilarinho Rezende; Denise de Souza Fleith; Clarissa Nogueira Borges. ***Searching for Answers: The Diagnosis Complexity in Cases of Twice-Exceptional Children*** **(B.37)** The assessment/diagnosis of giftedness can be sometimes accompanied by several disabilities. Some authors claim that the United States is experiencing an increase in the identification of gifted children who also have a disorder such as specific learning disabilities, attention deficit hyperactivity disorder, or autism spectrum disorder. Parents and teachers are interested about the identification and appropriate intervention. However, there is a scarcity of empirical research on the topic. Thus, the aim of this paper is to present a case study of a gifted child who was in the process of identifying a supposed Asperger's syndrome, i.e., a twice-exceptionality. Interviews were conducted with the child, with his mother, with his psychomotor therapist, with his teacher and with the psychologist of the enrichment program the child attends. Besides the interviews, some assessments made by psychologists were analyzed. In the interviewees' speech it is clear the difficulty that the family has to accept the Asperger's diagnosis and the professionals to identify it. They raise other diagnostic possibilities, such as learning difficulties, asynchronous development, central auditory processing disorder and even the possibility of these features to be the consequence of family environment and life history. Therefore, it is difficult to conclude the identification of a twice-exceptionality, since the symptoms can overlap. Even among qualified professionals in the field of giftedness the topic is controversial. So it is important to take precautions regarding the identification of twice-exceptionality. The diagnosis of Asperger carries a strong stigma and if misused can affect the social and emotional development of the child.

C.31 Terence Paul Friedrichs. ***Contemporary Needs and Approaches for U.S. Gifted Gay, Lesbian, Bisexual, and Transgender Students*** **(C.31)** Gifted gay, lesbian, bisexual, and transgender (GLBT) students face significant social and school challenges as they strive to meet their needs and show their great potential, even as their teachers attempt to implement increasingly-utilized curricular techniques on behalf of these pupils. This three-part session explains: 1) the significant social bias, in both law and school regulations, still facing gifted GLBT youth, 2) educational needs of resilient gifted-GLBT youths as well as their excellence in gifted programs and in academic, creativity, and leadership competitions, and 3) educators' empirically-backed techniques for helping these students. While bias against U.S. GLBT adults is abating somewhat, with enhanced employment and marriage rights, gifted and other GLBT youth still face extensive school harassment. Eighty percent face verbal harassment and 60 percent experience physical harassment (Friedrichs, 2005; GLSEN, 2011). Partly because of this harassment, GLBT students also experience much higher-than-average rates of dropping out, substance use, homelessness, HIV infection, and suicidal ideation, attempts, and completion (National Gay and Lesbian Task Force, 2006). Despite challenges, however, high-potential GLBT students have shown remarkable achievements. Both male and female sexual minorities have shown consistent excellence in four biographical, survey, and interview studies over 20 years (Friedrichs & Etheridge, 1991, 1992, 1993, 2005). Specifically, they have a disproportionately-high presence in gifted programs and among secondary-school-age academic, creativity, and leadership award winners (Friedrichs, 2012). These high-potential youth have demonstrated similar needs over time in seven critical categories correlated with gifted youths' optional functioning: intellectual, academic, social, emotional, physical, metaphysical, and aesthetic development (Clark, 2008). This session presents, for both males and females as distinctive groups, the most-commonly-seen need in each of these seven categories covered by the four layers of research and supported as significant by various other gifted GLBT researchers, including Peterson (2000), Cohn (2002), Treat and Whittenburg (2006), and Hutcheson (2013). For each of the seven needs, for both

males and females, the presenter will also explain empirically-backed educator approaches emanating from the same four sets of research subjects (Friedrichs & Etheridge, 1991, 1992, 1993, 2005). Once again, the cited approaches have been supported by Peterson (2000), Cohn (2002), Treat and Whittenburg (2006), and Hutcheson (2013). Throughout the session, attendees are encouraged to provide comments, from their varied geographical and social perspectives, on anti-GLBT bias and on diverse educational needs and approaches for gifted GLBT students.

C.32 Tracy Inman; Julia Roberts. ***The Importance of Culture in Differentiation*** **(C.32)** This session examines the necessary elements that must be in place for a classroom or school to be effectively differentiated. Since a majority of teachers knowingly do not differentiate (Archambault et al., 1993; Westburg & Daoust, 2003) nor address the needs of high ability children even when they know they should (Loveless, Farkas, & Duffett, 2008), educators must make fundamental changes to traditional classrooms if they are to be effectively differentiated. Although a strong repertoire of strategies proves instrumental to success, techniques alone will not create such classrooms. Educators must see the critical roles that content, process, product, and assessment play. Educators must recognize that they control the environment, from setting appropriately high expectations to respecting diversity (Roberts & Inman, 2009). They must philosophically imbed content, process, product, and assessment. In addition to understanding state or national content and gifted standards such as *Pre-K – Grade 12 Gifted Programming Standards* (NAGC, 2010), teachers must know their content; content experts can take concepts from basic to complex levels, depending on the child's readiness, so differentiation of content goes beyond varying content. Similarly, 21st century skills should drive the process, one that can be differentiated based on ability and readiness. As to assessment, many educators can't get beyond the "fairness" issue; in reality, they should be asking a fundamental question: How do I assess learning to ensure that all children learn every day? The presentation's goal is for educators to understand that the success of differentiated classrooms lies in an intentionally created environment.

C.33 Viviene DeOkoro. ***The Dilemma of Educating Gifted Students in Jamaica and the Caribbean, and the Triangulation of Successful Strategies Employed to Meet Their Educational Needs*** **(C.33)** The major objective of this investigation was to examine and transform the negative ethos and teacher-student dynamics that are typical of our Jamaican and Caribbean classrooms due to the high levels of asynchrony found among gifted students; improve their grades; raise their level of interest and enthusiasm for learning; and to sensitize and empower teachers to manage and deliver the highest quality education which will ultimately foster and maintain maximum student learning. This paper catalogues the experiences of a school administrator, working in collaboration with two teacher-leaders of Mathematics and English, in ongoing staff development workshops and daily debriefing sessions to investigate and address factors contributing to unsatisfactory academic performance in a group of gifted junior high school students. This study examines the general characteristics, behaviours, and attitudes of asynchronous gifted students; observes the student-teacher dynamics at the beginning, midway, and at the end of the study; makes comparative analyses; and offers a triangulation of remedial strategies to assist teachers to manage. The results indicate that the triangulation strategies of ability grouping, curriculum compacting, and timetabling, combined with teacher-debriefings, had a positive transforming effect on teacher and student behaviours, relationships, attitudes and grades. The focus of this study, therefore, is on the asynchronous development in gifted students, and the triangulation of strategies employed by a school administrator to enable teachers to cope and relate to their students.

C.34 Xingli Zhang; Xiaoyan Li; Mingxin Liu; Jiannong Shi. ***Comparison of the Development of Visual Search Abilities Between Children with High and Average Intelligence*** **(C.34)** This study compared the development of visual search abilities between children with high and average intelligence. 121 children aged 9-13 years old participated in the experiment. The Raven Progressive Matrices was adopted to measure their psychometric intelligence and to divide them into high (n = 34) and average (n = 87) IQ groups. The standard visual search paradigm was used and participants' reaction time (RT) was recorded through the DMDX system. The results showed that highly intelligent children reacted faster than children with average intelligent, while both groups had expected improvement in speed of information processing with age. Moreover, high IQ and average IQ children displayed similar patterns in the searches for color feature and conjunctions.

C.35 Yasar Barut; Hüseyin Mertol; Hilal Mertol. ***Metaphorical Perception of the Gifted and Talented Students with Regard to the Media*** **(C.35)** In this study, it is intended to determine thoughts of the fifty gifted and talented students who are between 8-14 years old and study 'Media Studies' at Samsun Science and Art School, using the method of metaphor analysis. In order to determine the thoughts of the students, who were involved in the study, on media, they were asked

to complete following sentences: "Media is..... such as/similar to. Because ..." Content analysis is used for analyzing and interpreting of data. The gifted students have created 114 metaphors about the media. The Metaphors, which were obtained, have been listed alphabetically. Frequency and percentage of students' numbers, which are represented to each metaphor, have been calculated. Some of metaphors that have become prominent are these: empty talk, entertainment, grass, gossip, life, lesson, monster, sea... Metaphor images, which have become prominent in the other phase of the study, have been divided into conceptual categories, and reasons for same are written under each metaphor. For example: Why the student has assimilated the media 'to gossip' in metaphors starts with "G" is that he/she thinks that it spreads so quickly. In conclusion, this study has evaluated that in general the gifted students have negative perceptions about the media. It is suggested that Television which is the most effective of mass media and other media elements should become more functional and an increase in intellectual knowledge through more qualify broadcasts is required. Thus, it is possible to create a society which includes individuals having critical/quizzical powers of thinking and can analyze subjects/information. If we do not want to have individuals that have become blind due to the low qualify broadcasts by mass media and cannot look at the world through his/her opinions in the society, it seems there must be a requirement to build an awareness around media, criticize present broadcasts/broadcasting and forge public opinion.

C.36 Patti Garrett Shade; Richard Shade. ***Nurturing Your Child's Creativity Fuel for 21st Century*** **(C.36)** Dorothy Parker stated, "The cure for boredom is curiosity. There is no cure for curiosity." All children are born creative and curious. They ask questions, explore, are imaginative, and need self-expression. The challenge for you is to help your child become even more creative and support them to maintain their creativity through childhood and adolescence. Most education and parenting is designed to help children conform, so it's very easy for children to repress their creative behaviors as they respond to these new environments. They soon forgot the joy and pleasures discovered and associated with creative behavior and shifted to the rewards of conforming. For years educators also believed creativity belonged only in the arts. Creativity can be taught as a set of skills, strategies, and tools that can be improved with practice. In this session we will explore attitudes towards mistakes, creative behaviors, climate conditions and the benefits of play. Creativity is now recognized as an essential 21st century skill. If your school is still catching up, you, as a parent, can help lead the way. Help you child and your school combat the "Creativity Crisis" that exists in our nation. As Sir Ken Robinson stated, "We do not grow into creativity, we grow out of it – or rather, we're educated out of it." This presentation will empower you to promote creativity as essential for every child, every teacher, every subject, every school . . . EVERYDAY!

T.1 Jing He. ***Self-Regulated Learning in Exam Preparation of Gifted High School Students*** **(T.1)** Exam preparation often requires considerable levels of self-regulated learning. In order to answer the questions whether gifted students are more self-regulated in exam preparation than average ability students, and in which aspects the gifted might excel, an empirical study was done with gifted high school students and ordinary students. Results indicated that students' performances in exam preparation were best predicted by a combination of motivational, affective, and cognitive variables. Highly gifted students attained favorable results in all these achievement determining variables, and in addition, turned out to be epistemologically more advanced than average ability students. Gender differences were found in test anxiety, self-efficacy, epistemological beliefs, and self-regulatory strategy use. In supporting students' self-regulated learning in exam preparation, students' self-efficacy, epistemological beliefs and active learning strategies should be promoted.

T.2 Suying Wang. ***The Research and Practice about the Differences of Gifted Children's Chinese Learning*** **(T.2)** Gifted children have prominent science thinking, and most of them are good at mathematics, physics and chemistry. However, there are significant differences in Chinese language learning among them. They are uneven in language perception, cognition, expression and discipline accomplishment. As a result, their psychological differences in learning Chinese are quite big. How to make every student have positive feelings when learning Chinese, to gradually narrow the gap among them and to get every student to enrich their knowledge and improve their ability and emotion as well? I study and practice the following links: the setting of teaching goals, the arrangements of classroom teaching, the choice of teaching methods and the design of teaching evaluation. I try to make students of all levels have a sense of achievement in learning Chinese, to narrow the gap among them and to achieve the purpose of their mutual improvement by stimulating their interest, adjusting their psychology, organizing different activities, and counseling individual students.

T.3 Hong Xie. ***Learning Needs and Intervention of Gifted Children with Learning Disabilities*** **(T.3)** During the past decades, increasing attention has been being given to the confusing question of high ability students who also have learning disabilities. These learning disabled gifted and talented students, or "twice-exceptional students" (Nielsen, Hammond, & Higgins) are exhibiting difficulties in school and are often considered underachievers. Their underachievement is

often attributed to poor self-concept, lack of motivation, or laziness. Twice-exceptional students assume that learning tasks will be easy for them and are not prepared for the difficulty that arises from activities in areas of their disability. This leads to frustration, tension, and fear that eventually becomes defensiveness. Due to this frustration, these students often tend to be aggressive, careless, and frequently off-task. They also cause classroom disturbances, and, similar to learning disabled students, seem deficient in tasks emphasizing memory and perceptual abilities. We appear to have reached an understanding that high ability and learning problems can both be present in the same individual. Nonetheless, research on the characteristics and needs of this population has been limited, and relatively few students with learning disabilities who are gifted are identified as such or given special services. Using the cases of two students who were assessed to be of superior intellectual capacity but have specific learning disabilities, this presentation will discuss the processes by which their difficulties and needs were identified, assessed and appropriately intervened.

T.4 Li Weng. ***How to Cultivate Gifted Children's Creativity in Class Activities*** **(T.4)** It is found in a 4-year-continuous observation of gifted students that creative thinking ability has a stronger relationship with personality than intelligence. This type of character is called '*innovative personality*'. We tried fostering gifted students' innovative personality in both daily courses and class activities in order to synchronize innovative personality with students' characteristics. According to the observation, the majority of the students set up their innovative personality distinctly. This passage gave detailed illustration on several class activities. This studying gave detailed exposition about how designing and implementation process play influential roles in fostering students' innovative personality in several activities.

T.5 Jinjian Qiao. ***Emphasis on Thinking in Gifted and Talented Children's English Teaching*** **(T.5)** There is always an imbalance between the development of the intelligence and non-intelligence for the gifted and talented children, based on their psychological features, such as strong perception, remarkable memory, sharp judgment, rigorous logic, quick response, but introverted personality and not good at communication. Some have dubious interests, occasional good or bad behaviors, and vulnerable emotions. Most cannot talk or write about certain topics and they don't have any ideas or feelings, since they are not old enough to experience and acquire much in their life. Therefore, as English teachers, we have to change our current English teaching approach in China, which places more emphasis on vocabulary, phrases and sentences, but totally ignores the thoughts as the soul in English teaching materials. We usually pay much attention to the tool value feature of English language teaching instead of its spirit----thinking. English learners should learn to feel, understand and be moved. The purpose of English teaching is to experience the authors' emotional worlds and transfer their wisdom to the learners. English education is part of the education for all-round sustainable development and we teachers have the responsibility to help our gifted and talented children become real life-long learners.

T.6 Shelagh Gallagher. ***"Just the Facts" or "Just Your Opinion!" The Implications of the Perry Scheme for Gifted Education*** **(T.6)** Why is it that despite your best efforts to provide open-ended inquiry-based activities, one group of students demands facts? Or, when you teach necessary facts, another group stares dully at you wishing for 'something more.' And does this have anything to do with giftedness? It might. William Perry's Scheme of Intellectual and Ethical development explains why student beliefs about education affect virtually every educational outcome. The scheme charts the development of an individual's belief about knowledge from dualistic, right-or-wrong thinking to the constructivist belief that meaningful understanding is the result of actively working with facts to form ideas. At each stage of the scheme, students restructure their beliefs about the nature of knowledge, the purpose of education, and the qualities of a 'good' teacher. A student who believes that learning is memorization may reject inquiry-based activities, and a student who believes understanding is constructed might think of memorization exercises as trivial. Understanding Perry's scheme is also important because 'mature' epistemology is a characteristic of expert thinking. By implication, shifting student beliefs about the nature of knowledge is an essential goal for the gifted program that hopes to help students move from novice to expert-like thinking. Learn the basics of the Perry scheme, see research documenting differences between gifted and typical adolescents, and discuss how the model can help chart a course of meaningful, relevant learning for gifted middle school students.

8 – GUIDANCE AND COUNSELING

F.1 Edward R. Amend. ***The Many Faces of Giftedness*** **(F.1)** Gifted children come in many shapes and sizes. They sometimes do amazing things that make us smile, from the one-year-old who speaks in full sentences, to the four-year-old completing advanced math, to the nine-year-old who reads four books a day. At other times, they say things in public

that make us cringe because their judgment is not always as advanced as their intellect. Some gifted youngsters—the twice-exceptional—come with additional challenges. Consider the math whiz who cannot spell or the amazing storyteller who cannot get her wonderful ideas on paper. When they struggle, it can make us worry and cry. As these gifted children grow, it is our guidance that helps them understand and face the challenges of growing up gifted. This presentation explores the lives of gifted youngsters and the joys and pitfalls of challenging, gifted children. Through their lives, the presenter will highlight strategies that can be used to guide gifted children on a successful journey.

F.2 Diana Caldeira; Colleen Anthony. ***Fostering Student Autonomy through Purposeful Goal Setting: Using System Management Tools for Advanced Learning Plans*** **(F.2)** Do your students believe goals are set for them…not with them? Is the student the initiator of her goals? Student goals should reflect self-understanding, student interest, passions, as well as foster self-esteem (Betts, 1995). This session will share ways to advance student autonomy through purposeful goal setting using a system management tool. The planning process using Goggle Docs and NAVIANCE for creating the merging of the Advanced Learning Plan and specific management tools will be discussed. Counselors throughout the district collaborated to create student friendly data driven surveys for schools. Participants will be guided through a student-driven goal setting process based on strengths and interests. Strategies for creating awareness of strength areas, defining what the strength areas mean, completing goal-setting templates, and writing goals in a SMART goal format will be addressed. Using an effective system based on a life cycle for Advanced Learning Plans with secondary schools in a large Colorado district, this session will provide teachers/counselors with a meaningful implementation process for goal setting that is about the student. The result? "Goals that plan for success, not just avoid failure!" (Whitney & Hirsch, 2007). (Del Siegle, 2000)

G.11 Jill L. Adelson; Hope E. Wilson. ***Perfectionism in the Elementary Classroom: Strategies for Teachers and Parents*** **(G.11)** Academic Achievers, Risk Evaders, Aggravated Accuracy Assessors, Controlling Image Managers, Procrastinating Perfectionists… Perfectionism comes in many shapes and sizes. Come join us in this presentation, providing practical strategies to help children move from unhealthy to healthy perfectionism. The session will include an overview of the research on perfectionism, examining some of the myths that exist about it, and we will discuss five types of perfectionistic behaviors and how to identify them. Using the book, *Letting Go of Perfect* (Prufrock Press, 2009) as a foundation, this presentation will provide strategies for teachers and parents to help move students from unhealthy perfectionistic behaviors to healthier behaviors. We will address practical classroom strategies for each type of perfectionism, including both bibliotherapy and videotherapy, and teachers and parents will leave with specific activities and discussion topics to use with their students and children. Finally, we will address overall strategies for the classroom that will help you create a healthy classroom environment that promotes personal achievement rather than perfection, including productive goal setting, constructive critiques, and managing homework, and we will address general strategies for the home that will help you create a healthy home environment that help with "crisis" moments, stimulates positive discussions and conversations, promotes celebrations of success and learning from mistakes, and develops a healthy attitude and behaviors toward homework.

G.12 Joan Jacobs. ***Bibliotherapy as Change Agent: Positive Intervention for Counseling Gifted Students*** **(G.12)** Bibliotherapy helps gifted advocates to maximize student potential and academic achievement. Bibliotherapy involves finding literature that resonates with a student and enables the child to make a personal change more readily; it thereby becomes the context for recurring interaction. Reading about a character's dilemma enables students to make observations about relationships, patterns of behavior, and blind spots. This is particularly beneficial for students who approach the world intellectually but lack self-awareness. It is far easier to talk about the choices and needs of a character than about oneself. When students can think about an emotionally charged situation intellectually, they create a template for solving the problem. The long-term consequence of well-chosen titles combined with effective questioning is that students can understand their own motivations and responses and subsequently appreciate their own unique qualities. Coming into the conversation through a book enables professionals to address concerns in a respectful manner that the student can tolerate and respond to without becoming defensive or self-conscious. This session will help counselors and teachers understand issues specific to the gifted population, titles that may help students, and suggestions for questioning techniques. Presenters will delineate generic bibliotherapy topics from asynchronies, underachievement, perfectionism, and other social emotional concerns more closely associated with the gifted population.

G.17 Susan Jackson; Amanda Trimillos. ***Meeting the Needs of Gifted Military-Connected Students – A Call for Research*** **(G.17)** Many gifted students and their parents experience difficulty when seeking appropriate services in schools

(Silverman, 1993). When those students belong to military families, they face additional problems associated with school and family transitions. Most military families experience an average of nine relocations, meaning that children are three times more likely than civilian students to go through a school transition. During times of war, a significant number of children of military personnel are also separated from at least one parent due to deployment (Bradshaw, et al., 2010). Military children experience stressors related to tension within the family, difficulties with peer relationships, adapting to school environments, and differences in educational programs, including those for gifted students. Some high achieving students, in general, have problems with the transition from middle to high school that result in loss of achievement or failure, which is associated with attrition at the first college attended (Smith, 2006). The U.S. Government has developed the Interstate Compact on Educational Opportunity for Military Children to address the concerns of military families with multiple relocations. Participants will examine the opportunities and resources provided by the Compact and discuss their application to gifted students experiencing transitions. Discussion will include the need for more educational research regarding the effects of relocation on gifted children in military families, how gifted children's abilities, personalities, intensities, and sensitivities contribute to the ways they deal with associated stressors, and the effectiveness of the requirements of the Interstate Compact in assisting schools in meeting their needs.

G.18 Susan Knopfelmacher. ***Mentoring Projects*** **(G.18)** Research and experience show that secondary schools cannot always meet gifted adolescent students' range of intellectual, creative, and socio-affective needs. A mentoring program which offers high-level challenge and the opportunity for gifted students to follow their academic passion with like-minded peers under expert guidance has great benefits. This presentation will explore a partnership over a number of years between a leading Australian independent girls' school, several universities, and the National Gallery of Victoria to provide an innovative academic mentoring program for gifted adolescents (14 to 17 years). Students undertake research in an engaging, conceptually challenging environment which nurtures high level critical and creative thinking, underpinned by a developmental approach based on Gagne's DMGT. Details of students' personal testimony and outstanding academic success will be related to this framework. The session will also show how these experiences help gifted students' preparation for and choice of future study and career pathways, linked to the school's unique Portfolio approach to personal and career development. By exploring something of university life while completing high level research projects, students gain a head start both in preparing for entry to top Australian, US, and UK universities, and developing the range of transferable skills required in a fast changing, globalised world. This session will focus on recent mentoring projects in the humanities, sciences and arts (e.g., astrophysics, photonics, cellular and molecular biology, classics, linguistics, curating a major art exhibition, multimedia, law, and business), and discuss their place in the school's overall Gifted and Extension Program. WCGTC 2013

G.19 Yoon Jo Lee; Hang Eun Lee; Kyung Pyu Lee. ***The Career Characteristics of Gifted Students in Invention and Entrepreneurship: Focusing on Career Maturity and Career Interest*** **(G.19)** The purpose of this study was to find characteristics of gifted students in terms of their career maturity and career interest compared to their peers. The participation is the 116 gifted middle school students in inventions who are very talented in intellectual property (IP) and Entrepreneurship. They are participating in the Future Creative Entrepreneurs program, which is to train gifted students by incubating their IP based ideas and pursuing the entrepreneurial value. In this study, we used Strong Career Exploration tests, which consisted of 2 subtests; Career Maturity Inventory (CMI) and Career Interest Test (CIT). In this study, the gifted students had a higher confidence level in their career-decisions, and higher career readiness than their non-gifted peers. They also showed higher career maturity levels, especially in terms of career attitude than average non-gifted students. However, there were no significant gender differences in career maturity levels. Based on the results of Career Interest Tests (CIT), the invention-oriented gifted students tended to be more investigative and enterprising in terms of their occupational preference.

G.27 Jean Sunde Peterson. ***A Change-Loss-Grief Framework: Helping Gifted Children and Families Cope*** **(G.27)** When death occurs, the counseling focus is likely on grief. After a debilitating injury, the focus is probably on adjustment. In these situations, the loss framework probably comes easily to mind. In contrast, a multitude of situations involving change may not bring loss and grief to mind. The goal of this session, which includes a hands-on activity, is to raise awareness that framing even undramatic changes as loss can be helpful. The focus is largely on the kinds of change that are not usually associated with grief, but might nevertheless generate grief reactions. Applying the change-loss-grief framework whenever something significant has been "left behind" can help gifted children, their parents, and even counselors make sense of troubling feelings related to relocation, changes in the workplace, or a reconfigured family, for example, but also even when someone must choose from many options, leave a developmental stage behind, let go

of a long-held perspective, experience rejection or disappointment, or reckon with loss of trust. Especially in situations involving disenfranchised grief, when others do not recognize loss, it is helpful for parents, teachers, and counselors to work within this framework, helping gifted youth to make sense of troubling feelings.

G.28 Jean Sunde Peterson. ***Giftedness, Post-traumatic Stress Disorder (PTSD), and their Intersection*** **(G.28)** In a 15-year qualitative case study of a gifted female, from adolescence through young adulthood, trauma seemed to beget other trauma. Literature related to Overexcitabilities (OE) and to social and emotional characteristics associated with giftedness was pertinent as the study was conceptualized and throughout the study. Literature related to child sexual abuse (CSA) became salient within the first year, and literature related to post-traumatic stress disorder (PTSD) was explored later, after the disorder was diagnosed in therapy. Of interest here are the themes that reflect PTSD: intense and confusing emotions, sense of powerlessness and lack of control, and extreme behaviors. In addition are phenomena associated with CSA, such as sensitivity to others' responses, eating disorders, and emotions related to lack of parental protection. Findings in a study of this kind cannot be generalized, cause-effect relationships cannot be ascertained, and no firm conclusions can be drawn about the interaction of giftedness and adversity. However, OE and positive disintegration will be discussed here in connection with responses to CSA and later trauma, some of them sub-threshold PTSD, but nonetheless with impact. One component of this session will be the impact of trauma on various areas of development. Educators and clinical professionals alike can benefit from the information provided here. Gifted youth can be traumatized, of course, regardless of demographics, and invested adults at school and at home are wise to stay alert to that possibility and recognize when outside help is needed.

G.29 Jean Sunde Peterson. ***What Clinical Professionals Should Understand About Gifted Kids—and Vice Versa?*** **(G.29)** As a counselor educator, I know that few counselors-in-training, supervisors, and referral resources consider the need to differentiate approaches for gifted youth. This lack can potentially damage the therapeutic relationship. I routinely include information for my graduate students about challenges for gifted children and teens related to social and emotional development. Using a developmental lens, I explain potential risk factors for both high achievers and underachievers. The graduate students invariably write serious "reaction papers" after I present information based on my studies of high achievers and underachievers, bullying among gifted youth, and gifted youth who are gay, traumatized, developmentally "stuck," from U.S. minority cultures, from difficult economic circumstances, or otherwise at risk for poor educational and/or personal outcomes. School administrators in training are required to take the school-counseling foundations course, where this information is included. They, like others in the class, realize that they have previously given little or no thought to giftedness beyond common stereotypes, assumptions, and academic performance. This session will focus on the non-academic development of gifted youth and will include some of the information presented in that course, including strategies for addressing social and emotional concerns in the classroom, school counseling office, or community clinic. Parents can also benefit from, and use, such psycho-educational information. I will also give brief attention to what gifted youth should understand about counselors and other clinical professionals.

G.30 Kathy Jones. ***Increasing Frustration Tolerance and Growth Mindset*** **(G.30)** Gifted children (and adults) get frustrated when they don't achieve success easily. To be successful, it is important to internalize the fact that effort and perseverance are required. Growth mindsets (Dweck) can be developed by solving puzzles and winning games that deliver high levels of frustration. The presenter will provide a research basis for and practical application of increasing frustration tolerance to achieve growth mindsets and success.

H.21 Debra Anne Mishak. ***Career and Life Planning for Gifted Adolescents and Young Adults*** **(H.21)** The transition from adolescence to young adulthood takes varying forms throughout the world. It happens at different times and in different ways, and is embedded in and informed by varying culture, tradition, and community held values. Gifted adolescents are, on the one hand, uniquely defined as such according to their cultural/ethnic/tribal group, and on the other hand, universally tied to their giftedness. Notwithstanding these differences, when adults mentor and nurture their gifted, talented and creative adolescents, their efforts dramatically increase the likelihood that these young people will become happy, curious and engaged adults, with the enthusiasm, motivation, self-awareness, and common sense to make reasoned decisions that honor their abilities and talents while remaining true to their unique needs and deepest held values. Because gifted and talented endorsement, licensure, and degree programs vary between institutions, states, and countries, those who work with or conduct research on the gifted also vary with respect to their self-efficacy as mentors and nurturers of intellect and talent. This session will review the unique characteristics of gifted adolescents and young adults, share effective ways to help the gifted discover their authentic

selves, and building on that discovery, help guide them in finding and embracing their own unique career and life plans.

H.22 Ellen D. Fiedler. ***Gifted Adults: Challenges across the Lifespan*** **(H.22)** Like children, adults go through life stages, and gifted adults typically encounter these stages earlier and more intensely. Gifted adults worldwide often struggle throughout their lives with issues and challenges specifically related to giftedness. This session explores a developmental model that focuses on the meaning and ramifications of giftedness at each stage of life from early adulthood through the final years – age 80 and beyond. Characteristics of gifted adults are described along with issues gifted adults encounter and tasks involved at each of life's stages. Erikson, Armstrong, Sheehy, and others provide information about significant life stages but with insufficient attention to the impact of advanced abilities, asynchrony, and intensity. By blending their ideas with insights about the lives of gifted adults offered by Roeper, Strezniewski, Jacobsen, Aron, Tolan, and Lovecky, greater understanding of life-long giftedness can be developed. Real-life examples of gifted individuals help illuminate issues and challenges at five specific stages of life from young adulthood through the middle years and on into elderhood. Information about each life stage is included with attention to the impact of advanced abilities, asynchrony, and intensity. Further concerns are described regarding what happens when giftedness is no longer identified or identifiable and giftedness becomes virtually invisible. Understanding stages of development for gifted adults has wide-ranging implications for teachers, parents, and counselors, as well as for gifted adults of all ages who may or may not be aware of their giftedness and how it has affected them throughout their lives. Suggested resources are provided.

H.23 Kristy Kowalske. ***Nurturing Spiritual Intelligence*** **(H.23)** How can our schools nurture the spiritual growth of students? Which extracurricular clubs, curricular units, and instructional practices provide avenues for students to prosper? What behaviors and techniques do effective teachers employ? This session will provide details about the educational experiences of a recent high school graduate recognized as spiritually gifted. Information about identifying spiritual giftedness in students will be provided, and details about how to implement strategies for nurturing spiritual growth will be shared. Encouraging students to be reflective about life's journey and equipping them to be active leaders is imperative for our future. This session will present information from a case study about the educational influences on the spiritual development of a recent high school graduate. In-depth details will be provided about curriculum, extracurricular activities, classroom environments, and teachers' behaviors and attitudes. The concept of spiritual awareness in the classroom is evolving in the field of gifted education. Many influential people have called for action to educate children in real-world ways by promoting social capital, ethics, and wisdom. Although these different topics do not encompass the totality of spirituality, they do address a similar educational philosophy of promoting the well-being of individuals and improving the overall well-being of mankind.

C.37 Lisa Van Gemert. ***Beyond Boredom: Understanding and Conquering Cognitive Weariness*** **(C.37)** Virtually everyone who interacts with gifted youth encounters the brick wall of boredom, and conquering boredom with research-based understanding and strategies is a key technique everyone serving gifted children or adults needs to have. Ironically, boredom is truly fascinating! This session will share quality, intriguing research regarding who gets bored, what boredom truly is, and why some people get bored while others performing the same task don't. Attendees will leave able to administer the Boredom Proneness Scale to students (or themselves!), and will also understand the physical and psychological symptoms and effects of long-term boredom. The good news is that boredom need not be a weakness – it can be harnessed to become a strength rather than a challenge. This session will explore what we can do to help anyone who finds that boredom lessens their enjoyment of school or life using both ancient and modern techniques. This session will wrap up with ideas for simple and free resources that will allow gifted students and adults to encounter any situation with boredom tendencies firmly in hand.

C.38 Lisa Van Gemert. ***Attacked from Within: The Effects of Stereotype Threat and Impostor Syndrome on the Gifted*** **(C.35)** Gifted youth face many threats to their emotional well-being that prevent them from achieving their dreams. In this session, we will face two of these threats head-on: Stereotype Threat & Impostor Syndrome. These threats distort gifted youths' views of themselves, create hesitancy where boldness is needed, turn victors into victims, deny gifts, and prevent academic risk-taking. When we recognize that we belong to a group that falls under some stereotype, we behave in ways, consciously and subconsciously, in alignment with that stereotype, creating a dangerous dynamic in which our deepest fears become realized. The effect on the gifted is profound. This session will explain what Stereotype Threat is, how to tell if a child is at risk, and what to do about it. Key, relevant research will be shared in easy-to-understand and engaging ways. Impostor Syndrome is a twist on "The Emperor's New Clothes" for the gifted. Rather

than having nothing on and being unaware of it, the gifted struggling with Impostor Syndrome often are beautifully clothed, emotionally and cognitively, but fear that they are not and that discovery of cognitive nakedness is imminent. Impostor Syndrome threatens virtually all gifted individuals at some point, and it is a powerful foe. In this session, we will explore what it is and how to counteract it in real and powerful ways. Participants will leave armed with real skills to meet these challenges head on and the ability to recognize youth (and adults) at risk.

H.26 Michele Kane. ***Nurturing the Inner Self: Positive Psychology Meets Giftedness*** **(H.26)** The field of Positive Psychology has reframed the lens of psychology from a focus on pathology to that of building on personal strengths for developing interpersonal and intrapersonal awareness. Gifted individuals who are exquisitely sensitive, emotionally intense, intellectually passionate, and deeply creative may have experiences that differ from the norm. This session centers on describing current work in Positive Psychology that has relevance for gifted individuals, especially gifted youngsters. Specifically, strategies for increasing resilience, fostering hope, developing emotional connections, practicing mindfulness, and exploring contemplative practices will be discussed. Gratitude, empathy, forgiveness, happiness, altruism, optimism, and compassion are some of the major themes that have been the topic of work by Dacher Keltner, Barbara Fredrickson, and Martin Seligman. This presentation will present the highlights of these key figures in the Positive Psychology movement and will provide the connection and application of this work to the lives of gifted individuals. Ideas for fostering social and emotional well-being and encouraging healthy relationships with self and others are at the heart of this discussion. Mindfulness tools, contemplative approaches and suggested plans to capitalize on signature strengths will be featured. These practices serve to enhance the aspects of individual assets and to develop these assets more fully in a creative and life-enhancing manner. Print material, websites and curricular initiatives will be shared.

I.21 Petra Leinigen. ***Implementing a Nationwide Counselling Service for Parents of Gifted Children on a Honorary Basis in Germany*** **(I.21)** In 1978 the 'German Association for the Gifted Child' (DGhK) was founded. In the beginning there was no counselling service at all for parents of gifted children in Germany. There were very few school psychologists and not many in private practices specializing in gifted education to turn to. Besides there were no books, let alone articles that parents could read, the first two books containing general knowledge were published in 1988. Over the years parents gained knowledge and were prepared not only to listen to other parents but also to give advice from their experience. This was a beginning. Over the years the DGhK developed a nationwide counselling service and today there are 15 branches all over Germany, usually with several sub groups. Participating parents are required to take part in training courses on subject such as: "When is testing important? / How to do competent counselling on the phone / How to lead a group, recognize and solve conflicts". The DGhK takes over part of the costs for such training. Parents can also pass the 'ECHA-Coach' at the ICBF in Muenster, including 30 hours of training on counselling parents of gifted children. Nowadays the DGhK also offers counselling by phone by teachers for teachers. The parents who work for the DGhK do so on a voluntary and honorary basis. The advantage for parents seeking help is that these counsellors are also accessible outside office hours, when children are asleep and parents can talk.

I.22 Robert Seney. ***Addressing Dabrowski's Overexcitablities Through the Genre of Picture Books*** **(I.22)** Authorities in the field continue to demonstrate that Dabrowski's Overexcitabilities provide an excellent and very informing framework in which to view gifted individuals. In addition, it is becoming obvious that the literary genre of picture books is developing into a surprisingly sophisticated resource for gifted readers of all ages. Since many, if not most, gifted students are avid readers, literature of all genres, including picture books, provide an appropriate springboard to meet their social and emotional needs. By connecting Dabrowski, picture books, and gifted learners' love for reading, we have an avenue on which we can guide our gifted learners to a celebration of self and of their giftedness. This presentation provides teachers, program directors, and counselors with resources to carry Dabrowski into the classroom, a need since little has been done in this area. In this presentation, a list of current picture books matched to the Overexcitablities will be shared and reviewed. Possible outcomes of these connections will be discussed as time permits.

9 – HOMESCHOOLING, PARENTING, AND PARENT MATTERS

F.7 Graeme Miller. ***The Pleasure and Privilege of Parenting Gifted Teens*** **(F.7)** Can parenting gifted teenagers really be a pleasure and a privilege? Having parented three gifted daughters through their teenage years and a gifted son three quarters of the way there, as well as having a profoundly gifted teenage boy board with our family for two and a half years, the answer is a resounding "Yes." This presentation shares the author and his wife's experience of what has

worked for them as well as what they have observed working and not working for others. Gifted teenagers have needs in common with all teenagers. They all need unconditional love, clear boundaries, open communication gradually devolved responsibility and the knowledge that their uniqueness is valued and nurtured. However, there are some needs which are particularly salient for gifted teens. They need attention given to their belonging and friendship needs, strategies for managing perfectionism, assistance in setting realistic standards for themselves and the understanding that the standards that they do set for themselves may not be fair for others. They need the opportunity to relentlessly pursue an individual passion or to pursue multiple interests at the same time. They need their asynchronous development to be understood as well as the intensity of their emotions. They also need parents who will advocate for them with schools or teachers who lack understanding of the needs of gifted teenagers. This presentation addresses the foregoing issues. Graeme Miller is currently in his eighth year as Dean of Advanced Learning Programs at Hamilton Boys' High School. He is currently working on improving his Ph.D. draft ready for submission.

F.8 Ingrid Dallal Fratz. ***Gifted Education in Mexico Is Struggling to Bloom*** **(F.8)** There are very few gifted education experts in Mexico, and they are mostly in the Mexico City area, including me. One of the most common issues when working with gifted and talented children is that parents do not know how to help them in their home environment, and most parents expect the government, schools, or/and experts to guide their kids without them participating in the process. The question is always there: how do I help my kid understand his/her giftedness? Because this question arose so many times, I created a workshop for parents to understand the basics of giftedness through hands-on activities that they can use at home with their children. This theoretical – practical workshop includes a current bibliography and activities that cover all the developmental areas that need to be addressed when working with gifted and talented children. This workshop has helped parents throughout Mexico. Technology works as an ally, and parents understanding and getting involved in their kids giftedness has been the first of what I expect to be many steps to develop a better educational approach which is much needed in my country. Presenting at the WCGTC 2013 conference will help other professionals, parents, administrators, etc. to create their own workshop to reach more gifted children.

F.9 Jen Merrill. ***Writer and Homeschooling Parent*** **(F.9)** Proposed round table discussion: Regardless of the educational setup for a gifted child, that child is gifted full-time, not just when schools decide to provide services. Parents not only bear the brunt of their child's complex intensities, but are accused of bragging or elitism by other parents when seeking support. Facing a world that doesn't understand that gifted kids are simply wired differently and that parenting them is much more difficult than believed, parents of gifted kids must join together, reaching back to those just starting on this wild path. This round table discussion will provide resources for finding, supporting, and advocating with other parents. One voice is complaining, many voices are a force to be reckoned with.

F.10 Karen Daniels. ***The Truth about Parenting Gifted Children*** **(F.10)** Giftedness is not a gift. Giftedness is a special need. Somewhere along the line we've lost the understanding that giftedness is not a label or an award. A gifted child is a child with special needs that need to be recognized and addressed in order to raise and educate happy and emotional healthy children. The impression that parenting a gifted child is easy because the child is so "smart," could not be further from the truth. More so than other children, gifted children can be overly demanding and highly sensitive. From birth, a gifted child's asynchronous development, and need for stimulation and mental engagement can make parents feel wholly inadequate and alone. No matter what culture you live in, arming yourself with parenting tools that will help you be more effective in parenting your gifted child means you will be better able to help your gifted child get what they need; in their education and their life. Come learn: (i) that you are not alone on this gifted-parenting journal; (ii) what giftedness is, and isn't, from a parent's perspective; (iii) why gifted children sometimes act the way they do; (iv) what parenting styles work best with gifted children; and (v) why encouraging your child's creativity can save the day. As a parent, it's up to you to learn what you need to know so you can be an effective positive force in your child's life.

G.4 Shari Orders. ***Gifted, eh? How Mothers of Canadian Children Assessed as Gifted Make Meaning of the Gifted Construct and Participate in Educational Decision-Making*** **(G.4)** This qualitative study explored the perceptions of a group of Canadian mothers of elementary school-aged children identified as gifted. The research was guided by *Image Theory* (1990) and *Ecological Systems Theory* (1979). The study sought to: (a) identify the meanings mothers ascribed to the gifted construct, (b) explore mothers' experiences of the assessment, identification and placement processes, and (c), identify factors deemed important to educational decision-making. Two data collection techniques were employed: survey (n=45) and in-depth interviewing (5 participants, 15 interviews in total). Interview candidates

were selected to represent a range of educational placement outcomes. The vast majority of study participants were highly educated and well resourced. Findings revealed that mothering gifted children was a complex and often emotional experience. Following their child(ren)'s identification, many mothers struggled to ascribe meaning to the term "gifted". Mothers frequently reported that their relationships with family and peers had changed as a result of having a gifted child or children. Several had experienced a "backlash" of sorts — particularly from parents of typically developing children — and were reluctant to share information with others. With regard to decision-making, a lack of accessible and timely information from the school district was a considerable barrier, prompting many to reach out to other parents of gifted children for guidance. Factors deemed important to educational decision-making included maternal beliefs about giftedness, child-specific and practical considerations, and the perceived attainability of gifted placements in the local school district. Educational decision-making was identified as the most difficult aspect of the maternal experience.

G.5 William Gregory Thomas; Susanne Penn Thomas. ***How We Teach: A Meta-Analysis of Newspaper, Journal, and Blog Articles on "Gifted" and/or "Twice-Exceptional"*** **(G.5)** There are many different reasons that parent choose to homeschool. One is that parents of "gifted" and/or "twice-exceptional" children feel that their children's specialized needs will not be met by public school systems that often have to teach to the average student. There are also many different "styles'" of homeschooling parents use including Charlotte Mason, School At Home, Classical Education, Unschooling, Radical Unschooling, Unit Studies, Waldorf, Montessori, Internet Homeschooling, and Eclectic Homeschooling. These styles are representative of different educational beliefs, and therefore the style chosen often reflects the justification a parent used to decide on homeschooling. This paper will identify the styles most often used by homeschoolers with either "gifted" students and/or "twice exceptional" students and the justifications offered for those choices through an analysis of newspaper, journal, and blog articles. Identifying homeschooling style preferences and understanding the rationale behind those choices will aid the development of more effective support systems by allowing for precise targeting of resources. Furthermore, a clearer understanding of popular trends will provide direction for further research into the efficaciousness of different homeschooling styles.

I.1 Lianne Hoogeveen Ketelaars. ***What about the Family?*** **(I.1)** In the education of gifted children, the family is an important factor (Mooij, Hoogeveen, van Hell & Verhoeven, 2006; Hoogeveen, van Hell & Verhoeven, 2012). Mooij et al. found that positive relationships between family members, a positive attitude toward the expression of emotions, and interest for academic achievement can be related to high academic achievement of the gifted child. Considering the data, joint activities of parents with their children seem to have a more positive influence on the school success of gifted students than pushing them to do their homework. In the ongoing study of Hoogeveen and Ketelaars (in progress), the research question is if and to what extent responsiveness of parents, communication between parents and children, the relation between the parents, and the social network of the family influence the motivation and school success of children in their first years in secondary school. Preliminary results will be presented, together with Lianne's experiences with clients (parents of gifted children) at the Center for the Study of Giftedness.

I.2 Lynette Breedlove. ***The Intensity of Giftedness: Helping Parents and the Community Understand Gifted Children*** **(I.2)** When I first began teaching gifted children, I would hear people say, "Everyone is gifted at something." I took that to mean they believed everyone had the potential to be gifted and talented. I disagreed with that, but had trouble explaining the difference between students who are above average, performing well in school and students are need the special educational services provided in gifted programs. Over time, through experience, and graduate education, I can now clearly explain the differences. And I do it every chance I get. There are four clear elements that separate gifted and talented children: their asynchronous development, their degree of giftedness, their intrinsic drive to know things, and their likelihood of being introverted. In addition, gifted children tend to be quirky in ways that are explained well by Dabrowski's Overexcitabilities. After hearing an explanation of the keys to giftedness and Dabrowski's Overexcitabilities, parents and the community better understand the differences between the children who work hard and perform well in school, and students who need special services for their education needs to be met. They begin to see gifted children, as a special needs group rather than an elitist group, and are more open to supporting services for gifted children. This presentation will highlight the intensities of giftedness. Understanding these differences helps parents and the community better understand the needs of gifted children and garner support for special services.

10 – INNOVATION EDUCATION

G.13 Juss Kaur Magon; Bruce M. Shore. ***Supporting an Online Community of Gifted and Talented Inquirers: Enablers and Barriers*** **(G.13)** Engaging gifted and talented learners in an online community of inquiry promoted by asynchronous discussion forum, presents both opportunities and challenges. A mixed-method case study employing nonparticipant observation of online interactions and focus-group meetings with tutors contributed to a qualitative analysis of how the members participated in the on-line forum. Quantitative analysis of membership data and online questionnaire responses addressed member characteristics and participation patterns. Analysis was inductive and interpretive, informed by an original synthesis of two theoretical perspectives: Garrison, Anderson, and Archer's (2000) online learning theory and the cognitive and affective domains for learning objectives proposed by Bloom and Krathwohl and their collaborators (1956, 1964). By shedding light on the types of communicative and cognitive skills that are demonstrated in such an online environment, it might be possible to enhance our understanding of how gifted learners establish relationships with others and how they co-construct knowledge. Content analysis of over 3000 messages posted or read by approximately 4500 gifted learners revealed not only community-based and ability-based characteristics that enabled the group to deal with social stigma, co-construct knowledge, and promote metal earning skills, but also brought to light several operational barriers faced by both the members and the tutors. The principal enablers were anonymity, encouragement, feedback, collaboration and the ongoing support for both emotional and cognitive needs provided by the tutors in a nonjudgmental, risk-taking environment. Amongst the principal barriers were the time delay between postings, the growing size of the community, and the need for structured questioning by the participants.

G.14 Nielsen Pereira; Shawn Jordan; Odesma Dalrymple. ***STEAM Labs™: Using Chain Reaction Machines to Teach Gifted Students Engineering Design*** **(G.14)** Gifted students need to be challenged both intellectually and creatively and benefit from team-building activities that trigger positive interactions with likeability peers. This presentation will focus on addressing these needs through teaching gifted students the engineering design process and applying it to building STEAM Machines™. These are Rube Goldberg®-style chain reaction contraptions that complete simple tasks in overly complex ways. Under the project-based STEAM Labs™ program, middle or high school students brainstorm ideas, design, and build creative inventions that solve everyday problems using these chain-reaction machines. Students are challenged to learn and apply the Boston Museum of Science Engineering is Elementary® engineering design process and to integrate science, technology, engineering, arts, and math concepts together in the design and construction of their machines. In addition, the program embeds students in local or geographically-distributed teams to expose them to other cultures, improve the quality and quantity of their design communication, and, by having students swap designs with peers, simulate a trans-national engineering and manufacturing environment. Machines designed by geographically-distributed teams face the added constraint of making their parts connect together across campsites by using communication technology. The machines must start at one site, progress through a number of challenging intermediate steps, and end with completing the simple task at the final site. This presentation will discuss results of a case study on the process of teaching this model in a summer enrichment program for gifted students as well as offer suggestions for implementing the model.

G.15 Stanislav Dovhyi; Oleksandr Burov. ***Research Giftedness: From Hidden Abilities to Successive Scientist*** **(G.15)** Critical and general fields of human activity, are showing a greater frequency of need for experts with high research abilities. Scientific training is currently conducted not only at the university, but also at the school level. Modern society needs to find, identify, train and support gifted children and talented youth as early as possible to get highly qualified experts for the areas of science and technology in the future. To describe the Ukrainian national system for engaging schoolchildren in scientific activity. The vertical "(inter-)school lab – university – postgraduate studies/ experimental site - business" was created at national, regional and local levels. Organizational, informational and educational tools were also created to ensure its elements functioning. Particular importance is the involvement of the Minor Academy of Sciences of Ukraine and virtual schools of young inventors and young scientists based on/in the Institute of Gifted Child. There are 10 thousand groups, clusters, and sections in different parts of the country operating in the system of Minor Academy of Sciences of Ukraine, in which over 250 thousand secondary pupils are involved (where 33,1% are pupils from the schools in rural area). Most of them demonstrate some achievements in particular area, but many students left outside scientific competitions though, can have hidden abilities for research. Tools to reveal such hidden abilities are discussed after the results of observation of more than 3500 schoolchildren from 8th to 11th grade (22 schools in cities Kiev, Dnepropetrovsk and Ivano-Frankovsk).

G.16 Viire Sepp. ***Programme Mobile Labs as a Tool for Curriculum Enrichment*** **(G.16)** Overloaded curricula and the lack of time and materials are the main reasons for deficiency in specialized and differentiated work with gifted children in regular classrooms in Estonia. The biggest problem is the lack of implementation of experimental tasks and practical work in chemistry, physics and biology classes in rural schools. To remedy this, in 2009, the program of Mobile Labs was started at the University of Tartu. Every day, six cars with equipment and tutors (masters' and doctoral students) drove to schools over all Estonia. Currently, more than 40 schools (zone centres) are involved in the program (reaching nearly 1000 students a year). Eight 4-hour lab sessions in each subject are carried out during the school year in each zone centre for students in participating schools. Zone centres are changed every year to allow more students to be engage in these practical lessons. Participating students report an increased interest in sciences. University students see this program as good practice for future pedagogical work. The project shows that it is possible to integrate Mobile Labs, as well as more than 30 optional e-learning courses offered by the Gifted and Talented Development Centre of Tartu University, into the school curriculum.

H.3 Fei Xu; Pengzhi Liu. ***Reflection on the Cultivation of Top-Notch Innovative Talents*** **(H.3)** To cultivate a large number of top-notch innovative talents is the objective requirement of constructing an innovative country and promoting the international competitiveness of this country in the world. Achieving such a goal in middle school not only asks for the long-term, inquisitive, holistic insights of leaders of the school, but also makes it indispensable for those decision makers to handle the relationship between *do nothing for life* and *do everything for progress*, and that between inclusive fitness and partial breakthrough in implementing the school principles in the educational system. It is the epochal choice for us to definitely and unswervingly carry out quality-oriented education to cultivate top-notch innovative talents in our school.

H.4 Lianne Hoogeveen; Mariska Poelman. ***Fighting Against Underachievement: A Joint Project of Scientists and Practitioners*** **(H.4)** The objective of the Dutch law titled "Subsidizing National Education Supporting Activities" (SLOA) is for schools to take responsibility for the development of the research and development in their own school by teaching and conducting practice-based scientific research. Bonaventura College in Leiden (the Netherlands) received a SLOA subsidy for its project "Fighting against Underachievement". The project involves working together in a multidisciplinary team consisting of a project leader in school, a research team of three teachers, a larger group of 15 teachers who attend the teacher training "Specialist in Gifted Education", and two scientists from Radboud University Nijmegen. Teachers are undergoing an interesting process of becoming scientist-practitioners. In this presentation, we will discuss the content of the project, consider the identification of potentially underachieving students and the appropriate intervention (tutoring), and the benefits of fruitful collaboration between practice (the school) and science (the university).

H.5 Kevin Besnoy; Dantzler, J.; Siders, J. ***I'm an Artist, Why is Technology Relevant to My Life? Artistically Gifted Students and Technology*** **(H.5)** In addition to managing and manipulating techno-science knowledge, 21st century marketplaces are seeking workers who have cross-cultural, collaborative abilities to create, express, market, and disseminate innovative products and ideas. An assumption that today's gifted students are savvy technology users innately capable of innovative tasks with any digital device may be an over generalization. While young people have a propensity towards manipulating technology gadgets, their natural technical proficiency does not mean they will automatically become productive users. There is a paucity of research documenting artistically gifted students' use of technology. Thus, the purpose of this pilot study was to begin investing artistically gifted students' perceptions about technology. Given artistically gifted students' natural potential for creative productivity, researchers were curious about their motivation to learn with technology, their perception that technology is relevant to their lives, and to compare those levels with their math/science gifted peers. In this study, researchers administered the Modified Fennema Sherman Attitudes Scales (M-FSAS) to 149 students enrolled at a residential school (grades 7 – 12) for artistically gifted and math/science gifted. Findings from this study revealed significant group differences. Based on these findings, researchers suggest that artistically gifted students are not as motivated to learn with technology or perceive technology as relevant to their lives abilities as their math/science gifted peers. For the artistically gifted population, these results potentially represent fewer career opportunities and creative outlets. Those who attend this session will be introduced to technology resources geared to artistically gifted students.

H.6 Laila Sanguras; Jan DeLisle. ***Independent Study – Mining for Gold*** **(H.6)** "Student choice" and "authentic learning experiences" may be buzz words in the typical educational setting, but are the foundations of an Independent Study course. Through structured opportunities for students to explore areas of interest beyond the curriculum, creativity,

problem solving, and talent development come alive. By spotlighting student strength and fostering innovation, Independent Study courses challenge and incite passion in all learners. The presenters will share data and anecdotes of success with some of their most challenging gifted students (profoundly, underachieving, and twice exceptional) as well as students in underrepresented populations. Participants will leave with an understanding of the structure, oversight, and support for this type of program, in addition to an excitement for how this could enhance existing gifted services.

J.1 Ananyashree Birla. ***Using Mathematics to Model Microfinance*** **(J.1)** The objective of this paper is to suggest how to use mathematics to find an efficient system for choosing the right customers who fit an ideal customer profile for microfinance lending. Microfinance, a model first established in Bangladesh under the name of the Grameen Bank, is a system of lending money to people from low income groups who do not have any physical collateral to offer to commercial banks. This process promotes financial inclusion within society. As this type of lending can be very risky given the customers' low financial backing, it is clearly very helpful to devise an in-depth credit scoring system so that microfinance companies can better assess their customers' credit-worthiness. Under this proposal, data from actual microfinance databases will be collected and analyzed using algorithmic methods and other techniques. The methods used will create a scoring system to check the reliability of each customer. If mathematics can be successfully used to create such a credit scoring system, microfinance companies would be able to determine easily the credit appraisal for each customer profile. The implications of this would be to mitigate risk, reduce bad debts, and dramatically increase the chances that the microfinance model will be successful.

J.2 Bo Zhao. ***"Tiantan Orienteering": An Analysis of the Development of Hidden Curriculum in School Sports*** **(J.2)** As a key middle school in Beijing, Beijing No. 8 Middle School pays attention to quality education, and develops physical education using the natural environment of the PE classroom. An orienteering program involves computing time, designing a route, implementing the activity, and activity feedback. The results from the program show that orienteering promotes students' physical and mental development, and it is an ideal choice for a school sports program to be embedded in the curriculum.

11 – MORAL EDUCATION, VALUES, AND SOCIAL CONSCIENCE

H.13 Ellen Honeck; Christie Bruns. ***Exploring the Spectrum of Service Learning to Social Action*** **(H.13)** Gifted children are empathetic, caring, interested in the world around them, technologically savvy, and exposed to a variety of types of media. This media exposure often introduces gifted children to issues of local, national, and global concern. They can become overwhelmed by such exposure, confronting issues which are difficult for adults. Service learning allows students to develop dispositions and skills, which enable them to actively address issues of global concern. Following student passions, introducing them to issues through curricular experiences, or attending to issues currently in the media, teachers can help to support gifted students in their work to address such issues. Students become active stewards of their global community through investigation of problems, generation of solutions, explorations of cultural impact and implementation of service. Service learning is flexible so that it may be adapted to multiple settings. These real life experiences support the social and emotional growth of students in conjunction with the development of critical, intellectual, and social skills. This session will introduce participants to an expanded view of service learning in which students assume a leadership role in a variety of hands-on service projects. A range of service learning projects conducted with three year olds through eighth grade students will be described. Information related to appropriate resources, selecting developmentally appropriate projects, responding to student interest, accessing necessary funds, and the development of organizational structures will allow participants an opportunity to create their own service learning experience.

H.14 Jessica Cannaday. ***Faith Based Education and Gifted Education: Where Two Roads Meet*** **(H.14)** The intersection of Christian Teacher Education Programs and Gifted and Talented Education has often been a difficult one. Public schools are appropriately secular, yet many of the teachers and students at these schools hold strong faith values. Teacher credential candidates at one Christian University spend a good deal of their credentialing program reconciling how they will maintain their sense of self, primarily their faith perspective, while teaching in the public schools. In this paper presentation, the author, herself an Associate professor of teacher education at this Christian Institution, demonstrates possible methods of teaching the gifted and talented in a public school setting, while staying true to the faith needs of the individual teacher. Faith integration in the private school GATE setting is also discussed.

H.15 Nadine K. Hinton. ***Lower School Dean of Studies, The Wellington School Pastor Bonhoeffer's Story*** **(H.15)** Can you imagine that a pastor would say, "It is better to do evil than to be evil"? This is the story of Dietrich Bonhoeffer, a devout man in an unholy place and time. He joined the plot to kill Hitler, and his story resonates today with gifted students who yearn to examine ethics, explore the complexities of the world, and reflect on how they can make a difference. An extraordinarily gifted man himself, Pastor Bonhoeffer's story includes secret agents, the 1936 Olympics, imprisonment, torture, coded messages, smuggled love letters, daring plans to escape, and even a one-armed man!

H.16 Alfred Yat-laam Lau. ***Positive Life Experiences of Gifted Youth in Hong Kong: A Replication Study*** **(H.16)** The emergence of positive psychology in gifted literature (e.g., Renzulli, 2009) calls for attention to the contribution of core values (e.g., optimism, courage, and sensitivity to human concerns) to human excellence. Echoing this idea, the current study replicated the methodology used in Peterson, Canady and Duncan (2012) to illuminate the experiences of positive life events and their relations to core virtues among gifted youth in Hong Kong. Sixty twelfth grade gifted youth who demonstrated giftedness in mathematics, sciences, humanities, and/or leadership domain completed an online survey, part of which consisted of four open-ended questions on positive life experiences and sources of support. Student responses were analysed with content analysis. Findings revealed intense involvement in academics, extra-curricular activities, community services, and social life that is exclusively school-related. These experiences resulted in elevation in self-concept, gain in perspectives, strengthened social connections, new vision and direction, improved well-being, and knowledge/skills gain, some of which have an impact on the development of gifted youth. Findings were interpreted and discussed with reference to core-values framework (Peterson & Seligman, 2004) and compared with the results in Peterson et al. (2012).

J.7 Mehmet Fatih Varli; Gürhan Kurukaya; Ümit Davaslıgil; Adviye Pınar Konyalioğlu. ***A Study of Values in Gifted Children*** **(J.7)** Values are very important influences on individuals' behaviours, morals and attitudes. This is even more important for gifted children so that they use their intelligence for the welfare of mankind. The purpose of this study is to report on the relationships between the values, perfectionism, and cognitive styles of 4th and 5th grade gifted students and their parents. To assess thinking styles, Learning Thinking Working Styles Inventory was used to assess perfectionism, and the Multi-Dimensional Perfectionism Scale to assess values, Portre Value Survey was administered to students in pull-out programs at the Bilim ve Sanat Merkezleri (Science and Arts Centers), a unique government after-school program for highly gifted students in Turkey. The results obtained by correlation and regression analysis will be discussed.

J.8 Mehmet Fatih Varli; Ümit Davaslıgil; Adviye Pınar Konyalioğlu. ***Research about Values in Gifted Children*** **(J.8)** Values are very important to behaviours, morals, and attitudes of individuals. To use their intelligence for the welfare of mankind, this is even more important for gifted children The purpose of this study is to find out relationships between the values, perfectionism, and cognitive styles of 4th and 5th grade gifted students and their parents. To assess thinking styles, we used the Learning Thinking Working Styles Inventory; to assess perfectionism, we used the Multi-Dimensional Perfectionism Scale; to assess values, the Rockeach Value Survey was used. These were administered to students of Bilim ve Sanat Merkezleri (Science and Arts Centers) which is a unique government after-school program for highly gifted students in Turkey. This is a pull-out program. The results obtained by correlation and regression analysis will be discussed.

J.9 Patricia Gatto-Walden. ***The Call to Meaning through Service*** **(J.9)** Never before in history has the reality of interdependence and connectedness with people across the globe been so obvious. Today, technology unites us with people of diverse cultures, beliefs and customs. Due to this world-wide communication paradigm, we have entered a time of global-citizenship. Some intellectually gifted children have equally compassionate gifted hearts. Certain days they celebrate news from across the sea, while other days they are troubled to learn of traumas and suffering. Their intensity and sensitivity bring the outer world into their inner landscape. These special children innately live the guiding principle of interdependence among all life. With expansive imaginations, they can create innovative solutions to world issues, or invent frightening images of poverty, injustices and natural disaster. Such globally empathic children are anxious with the state of the world and feel an inner urgency to make a difference. Incorporating decades of clinical and consulting work with gifted youth who are demanding meaning and purpose in their daily lives, and who are disquieted with the state of worldly affairs, the presenter will share how to aid children answering, "What do I have to offer?" "How can I be of service?" The presenter will enumerate ways to facilitate personal exploration to define what they can do today to instigate positive change, and the core conditions necessary to support these youth to acquire health and well-being in their daily lives. Might these children be the true stewards of the planet?

K.1 Patricia Gatto Walden. ***The Highs and Lows of Emotional and Spiritual Giftedness*** **(K.1)** The significance of emotional and spiritual giftedness in an individual's life is paramount, but not readily understood by others. Everyday life is vastly different for those who feel profound depth of empathy, responsibility for others, unyielding care about the environment, humans and animals, uncompromising moral and ethical beliefs, and intense and scrutinizing introspection. Throughout life these individuals live the guiding principle of interconnectedness with "all that is". Irrespective of their age, they are emissaries of peace and justice, compassion and kindness, while concurrently shouldering the emotional atrocities of our world. Often their feelings and personal experiences have such strength and gravity that other children and adults avoid their presence, and mock or ridicule them for their mysterious knowledge of what is beyond the physical plane. Bystanders often feel uncomfortable with the forthright philosophical convictions that arise naturally from their depth of experience in daily life. Drawing on three decades of clinical work with this population, the presenter will focus on distinctive and overlapping characteristics of children and adults who are emotionally and spiritually gifted. While being inspirational exemplars of moral, ethical and spiritual living to those who can see and accept their unique abilities, these children and adults often feel the need to hide their experiences and intrinsic knowing, thereby protecting themselves from harmful inquiry and judgment. Feeling profoundly alone and misunderstood, they yearn for closeness, empathy and meaningful relationships. Their extraordinary consciousness and wisdom, transpersonal experiences, vulnerabilities, and commonly expressed hopes and needs in attaining personal wellbeing will be detailed.

K.2 Ellen Honeck; Christie Bruns. ***Educating Global Citizens: Embedding Human Rights into the Curriculum*** **(K.2)** In our ever-increasing global society, it is important for students in all settings, across all cultures, to be familiar with and understand the complexity of human rights issues. Through education about human rights, students will create and develop innovative solutions to these issues. Human Rights Education embeds the interdisciplinary theme within the 21st Century framework of Global Awareness and culturally responsive pedagogy and multicultural education. A comprehensive human rights focused education will support students in their understanding of a range of global issues, recognizing and utilizing various cultural lenses. Gifted students are intensely interested in complex, real world issues. This session will focus on a newly developed Human Rights Educational Model that focuses on the education of students through the use of integrated, meaningful content. The model includes Personal Identity, Information and Awareness, Recognition and Critical Consciousness, Solution Development, Transformation and Global Citizenship. The model is not structured as a hierarchy but rather as a model focused on process. A combination of the model and integrated content into the classroom's current curriculum will provide students the understanding of human rights issues and prepares them for the 21st century. This session will introduce the model, discuss the benefits and challenges of exploring such content, and provide sample lessons and topics that have been integrated into classrooms in developmentally appropriate ways.

12 – PARTNERING GLOBALLY FOR SUCCESS

L.5 Adam Boddison. ***The IGGY Experience: The Development and Experiences of Ten Gifted Students in a Global Educational Social Network*** **(L.5)** IGGY is a global educational social network for gifted students aged 13 to 18. Based at the University of Warwick, IGGY seeks to challenge and connect the world's brightest young minds. In this session, IGGY's Academic Principal will detail the initial findings of 10 case studies, each of which has been tracking the development and experiences of individual IGGY members. Within the broader phenomenological case study methodology of this research, the underlying methods are centered on semi-structured interviews and visual discourse analysis. IGGY was designed to facilitate the development of giftedness in those young people with significant academic potential. These studies explore the positive outcomes and constraints when a blended model of online social networking and media-rich content is used with gifted students. In particular, there is a focus on whether such an environment is able to facilitate an effective social constructivist model of learning. Many gifted and talented organizations use testing (e.g. IQ tests of cognitive ability tests) to identify suitable members. However, IGGY does not test and instead uses a broader identification strategy, which involves self-nomination with teacher endorsement. This session will examine the benefits and drawbacks of an inclusive, rather than an exclusive, community by focusing on the potential of students in addition to their actual achievement. The session will conclude with a look ahead to how current research will inform IGGY's practice in the months and years to come.

L.6 Connie Phelps. ***Celebrating Four Initiatives of Gifted Education in France*** **(L.6)** This session summarizes observations gained through a study of four initiatives with national significance in gifted education from four regions across

France conducted during a Fall 2012 sabbatical hosted by the Université Paris Descartes. The initiatives addressed: (a) elementary education, (b) secondary education, (c) psychological services, and (d) parent advocacy. Presented chronologically and geographically, the first initiative observed individualized instruction of secondary gifted learners in public middle schools in Chambéry in the Alpes-Rhône region in southeast France, followed by an in-service training for high school teachers on high ability learners in the city of Vienne. The second initiative observed practices at a unique institution, the Centre National d'Aide aux Enfants et Adolescents à Haut Potentiel (CNAHP), a hospital for gifted children, located in the city of Rennes in the Bretagne region of northwest France. The third study focused on the Association Nationale Pour les Enfants Intellectuellement Precoces (ANPEIP), a national parent group. This included travel to Nice in the Provence-Alpes-Côte d'Azur region near Italy and interviews of the former ANPEIP president (a private school director for high ability children) and ANPEIP founder/psychologist Jean-Charles Terrassier. The fourth initiative related to studying younger gifted children with a clinical psychologist specializing in young gifted children located in the city of Nîmes in the Languedoc-Rousillon region and with a teacher-trainer for elementary teachers in the city of Montauban in the Midi-Pyrénées region in southern France. Interactions with a range of stakeholders across the country yielded a rich understanding of gifted education in France.

I.13 Ian Warwick; Adrian Hall. ***The Art of Writing – A Worldwide Online Resource*** **(I.13)** Our presentation will demonstrate a newly developed highly creative resource that enables students to explore all aspects of writing from a high challenge perspective as part of an online community. This is the result of an exciting collaboration between three thought leading organisations, IGGY, London G & T and Moviestorm. The resource breaks down the art of writing into 12 core ideas that have been mapped and are applicable worldwide. It opens up key questions on what techniques brings our words alive. These concepts are in turn broken down into 4 or 5 component skills. Each of these have 4 short extracts from novels and 4 clips from films to illustrate how each component works. This demonstrates to students how to appreciate and use with flair a wide variety of writing conventions for different contexts. The resource has also been designed for students to achieve a secure critical grasp of literary devices to help them express themselves in powerful and original ways. In addition online tutorials, writing activities and community discussions have been set up, for students to explore and comment on, with elaborations and peer reviews for each idea. The learners explore techniques from the texts, the clips and the guidance, and are encouraged to write their own scripts and stories to illustrate their newly acquired expertise. They are then enabled to creatively try out their new understanding by making their own films using a powerful industry standard movie making tool. The plan is that these will become 'Build your team, build your movie' international collaborations.

I.14 Karen Bendelman. ***e-Mentoring – Bringing Together Gifted Educators*** **(I.14)** The e-mentoring program at the International Gifted Education Teacher Development Network (IGET-Network) is an online program in which an experienced educator or administrator in gifted education is paired with a teacher who needs additional support to meet the needs of potential gifted students or advanced ability learners. This service supports teachers in countries that do not have program services that identify gifted students. The mentors provide advice, classroom guidance, support and diverse teaching strategies. This program is connecting teachers from different parts of the US, with South Africa, Botswana, China and South America. Serving as an e-mentor gives one a chance to build a relationship with other teachers who may not have access to the resources and information needed to provide services to gifted children. Therefore, e-mentors serve an important role in providing a variety of strategies and resource suggestions to ensure that the learning needs of the student are met. As part of attending this session educators will: (i) Learn about the e-mentoring program, its benefits and challenges; (ii) Listen to experiences implementing the program in different countries; and (iii) Learn how to become a mentor or mentee. Developing an e-mentor and mentee relationship builds a professional cadre of educators internationally who understand and support gifted education.

I.15 Laurie Jane. ***Croft Global Talent Development: Developing Networks of Qualified Professionals*** **(I.15)** "If … schools are to become centers of excellence, then their most important human resource (i.e. teachers) must be effectively developed" (Sternberg & Horvath, 1995, p. 9). This seems to be particularly true of teachers of gifted students. Gifted children appear to be more dependent on their teachers than other children (Kesner, 2005); successful teachers of the gifted are particularly important in the lives of their students because they serve as catalysts, empowering students to achieve greater knowledge and expertise in their areas of ability and to attain a growing sense of autonomy toward learning. While Polk (2006) and others have concluded that many of the same competencies and characteristics are evident in all effective teachers, outstanding teachers of the gifted do indicate a specific preference for teaching gifted students (Bishop, 1968), have a positive attitude about talented learners (David, 2011; Plunkett & Kronborg,

2011), and are willing to advocate for the gifted (Roberts & Siegle, 2012). The Belin-Blank International Center for Gifted Education and Talent Development has organized the *Recognition of Excellence in Talent Development*, a global professional development program available online. With a history of success in both professional development and networking across the world, the Center is providing English-language classes that will empower educators who want to support the development of extraordinary student talent. Enhancing understanding of the nature and needs of high-ability leaners, of specific teaching skills, and of appropriate educational environments, these courses will also encourage global networks of like-minded professionals.

13 – SOCIAL-EMOTIONAL NEEDS OF THE GIFTED, CREATIVE, AND TALENTED

I.19 Karen J. Micko. ***How Gifted Kids Describe their Experiences in American Schools*** **(I.19)** Relatively little research has been reported on the "inner life" (Peterson & Ray, 2006) or "personal experience" (Coleman & Cross, 2000) of being gifted. How the students, who have been identified within their schools, view and make meaning of their life-worlds can provide insight and understanding to parents, counselors, educators and theorists alike. By reviewing an array of phenomenological research, this presentation considers many facets of the socio-emotional lives of gifted students by reporting how the students themselves perceive them. Issues of meta-cognition of their own differentness, the societal stigma of being gifted and the strategies sometimes chosen to cope with being gifted are presented. Within typical American schools, described as "inherent social enterprises" (Cross & Swiatek, 2009) gifted students face an environment not designed to meet their needs. How the students react to the structure and expectations of teachers is explored, as well as the social interactions of same-age peers within the classroom. Issues such as academic resistance, being challenged, feeling bored and living passionately are addressed. Finally, analyzing atypical gifted schools and also typical schools which have gifted-friendly school programs sheds light on the importance of social context influencing the successfulness of gifted and talented students' academic and emotional lives and how they perceive these environments. Listening to the voices of gifted and talented students from various ethnic backgrounds allows great insight into their lived experiences and provides the opportunity for understanding and clarity.

G.7 Albert Kaput; Chantal Woltring. ***Misdiagnosis & Giftedness: Effects, Solutions & Prevention*** **(G.7)** High-potential drop outs, who no longer function in school, have been receiving care, education and accommodation at the Centre for Creative Learning in The Netherlands since 2001. Our children/adolescents are high-potentials who experienced long standing mismatches with their environments: often having changed schools 3 or more times and seen several health care professionals. Almost all children who come to our mental health care institute suffered additionally from prior misdiagnoses by the regular health care profession. The labels they carry often contain: autism, AD (H) D, dyslexia, ODD, PDD-NOS and NLD. Giftedness often has not been taken into account during these diagnoses. From first contact in the intake interview, we create an atmosphere of equality, trust and rest. Children open up and tell us more than they did to their - surprised - parents. Their development, potential, ambitions and perspective on their lives are the subjects. Our psychologists succeed in re-diagnosing our children in ways that fit them better (identity problems, social phobia, PTSD, study problems, depressive disorder). There is a place for everyone under the rainbow. CCL exists for those gifted children, who lost this belief and helps them reclaim their place in this world. We hope to inspire the use of our more client-centred approach, versus traditional approaches that make our gifted children feel not-understood, misjudged or angry.

G.8 Alfred Yat-laam Lau. ***Adjustment Issues among Gifted Youth in Hong Kong Social-Emotional*** **(G.8)** Often gifted youth encounter psychosocial issues in adjusting to their gifted identity. Chan (2003, 2006) developed a 24-item Student Adjustment Problems Inventory (SAPI-24) to assess these issues and identify service gaps for the gifted. Using quantitative and qualitative approaches, the current study aims to: (1) examine the psychometric properties of the SAPI-24 with a new Hong Kong student sample; (2) reassess the adjustment issues pervasive to gifted youth in Hong Kong; and, (3) enrich our understanding of Hong Kong youths' experiences with their gifted identity. Participants included 645 seventh through twelfth grade gifted youth who demonstrated giftedness in mathematics, sciences, humanities, and/or leadership domain. Issues pertaining to adjustment to gifted identity were assessed with SAPI-24 and two open-ended questions. Our data replicated the psychometric properties of SAPI-24. Analyses indicated that intense involvement was the most prevalent adjustment issue among gifted youth in Hong Kong, followed by multipotentiality, perfectionism, parental expectations, unchallenging schoolwork, and poor interpersonal relations. However, issues

with poor interpersonal relations, parental expectations, and perfectionism were more intense in our student sample than those in Chan (2006). Gender, grade level, and domain of giftedness were unpredictive of adjustment issues, except that male students reported significantly higher levels of unchallenging schoolwork than female students. Students' responses to open-ended questions included themes like changing expectations, poor peer relations, and not being understood—suggesting some degree of convergence to issues assessed in SAPI-24. On the other hand, their responses also illuminated positive changes associated with their gifted identity, such as more respect from others, and more opportunities for talent development.

G.9 Burak Turkman. ***Developing the Academic Motivation, Achievement, and Social Skills of Emotionally Sensitive Gifted Children: Best Practice Recommendations*** **(G.9)** The aim of education is to create suitable environments for students allowing them to demonstrate their abilities, thereby increasing their intrinsic motivation to learn. Much of the research on educational settings is done according a baseline or "general" student. Students who are gifted and twice exceptional face a variety of problems in a general classroom. In light of this fact, the gifted education seeks to differentiate and enrich the current curricula in order to address gifted students' academic needs. However, these academic differentiation activities do not address gifted students' emotional needs successfully according to parents and teacher feedback. There is little research about addressing emotionally gifted students' needs with differentiated curricula and activities. Additionally, teachers are often not aware of gifted students' emotional sensitivity issues. Psychometric intelligence theories and research further misguide parents and teachers because these theories do not take these emotional differences into account. The result is that many well-researched and well-intended differentiation activities miss the target. Gifted educators must closely consider emotional sensitivity, motivation, and achievement factors in their differentiation activities and curricula. In order to facilitate the practical use of available research, recommendations for best practices are presented. These recommendations are formulated from both academic, scholarly research and personal experience within a gifted classroom.

H.27 Debra Smith; Jill Minor. ***Unfolding, Not Molding the Gifted Child: A Collaboration Between a School Counselor and a Gifted Intervention Specialist*** **(H.27)** Most gifted programs are designed to support the academic needs of students with measurable outcomes and standardized implementation. In addition, parents and teachers push that these programs for academic support move beyond the "regular" instructional practices. However, little attention has been given to the social and emotional support that these children need in order to be successful for the long term. Many of the students identified as gifted face other, more hidden, challenges that will hinder their success in the years to come: perfectionism, isolation, intense behaviors, inability to communicate with peers, asynchronicity, and even a skewed self-conceptualization. To help this population, a counselor and gifted specialist have teamed together to develop activities to give these students strategies to understand their own abilities and feelings. Participants will learn what some of these challenges are, strategies to help the students understand them, and effective activities they can do in either a classroom of gifted students or a school counselor's small group. The activities are designed to be exploritative, to promote discussion and discovery, and to serve as building blocks for each other.

H.28 James Luther Moore III; Dwan Robinson. ***Social Isolation, Emotional Distress, and Psychological Frustration among African American Males in Gifted Programs: Implications for Teachers, School Counselors, Principals, and Parents*** **(H.28)** Over the years, many social scientists have suggested that African American males, including gifted, share a collection of distinct psychological and social realities that differ them from their African American female and white American male counterparts. Data from popular and scientific literature suggest that African American male students represent a population at-risk. In general, they are frequently confronted with social stressors that often impede their psychological, social, and emotional well-being. There are numerous domains and contexts in which African American adolescents experience slights or insults. However, some domains, such as gifted education programs, seem to be more pervasive than others. The two presenters will focus on the social, psychological, and emotional challenges African American male students often experience in society in general and gifted education in particular. The presenters will also identify specific interventions and strategies for working with this student population. In addition, the presenters will illustrate how educators (e.g., teachers, school counselors, and principals) and their parents can intervene on behalf of these students.

H.29 Lisa Van Gemert. ***The Gift of Self: Developing Effective Self-Concept in Gifted Learners*** **(H.29)** Self-esteem is a loaded term, yet most of us would agree that some degree of self-esteem, concept, or confidence is necessary to function well in the world. Gifted learners need to develop a positive self-concept through authentic activities that build confidence

in themselves from the inside out. This is the kind of self-identity that is lasting and protective. When gifted learners have strong self-concept, they are more willing to take risks, less likely to give up easily, and are, in general, better at surmounting some of the common pitfalls of gifted students. How can educators and parents increase this kind of self-concept without resorting to hollow, ineffectual praise or, on the other extreme, creating arrogant, self-centered children? This presentation uses current research and compelling examples to show how parents and educators can build self-concept through simple yet powerful activities and experiences. Participants will learn how children's self-esteem is constructed, how to praise them effectively (or not), how to provide truly authentic experiences that grow the individual, and how to privilege intuition in order to build confidence. Parents and teachers alike can creatively use everyday life experiences to grow confident, effective children who have a solid core of self-concept.

I.1 Nathan Levy. ***The Interrelationship between Social Emotional Needs and Critical Thinking*** **(I.1)** Gifted children (and adults) run the gamut of emotional extremes. Join author, consultant Nathan Levy as he shares critical thinking strategies that can help both groups. This humorous presentation will have participants thinking and laughing as they explore specific strategies and message appropriate gifted children and adults. Demonstrating dynamic techniques that have proven effective Mr. Levy will reveal the power of children feeling the benefits of hard work and perseverance. Mr. Levy will have participants simulating the types of stress gifted children feel. Strategies that are productive for academic achievement will be shared in ways that demonstrate the powerful connections between high challenge, superior performance and well-being.

I.3 Terry Bradley. ***Supporting Emotional Needs of the Gifted*** **(I.3)** Discussion groups are an often over looked school-based intervention that have a huge pay-off in social and emotional benefits for gifted students. Terry has facilitated Student Discussion Groups for middle and high school students for the past eleven years. Terry will provide information and materials with suggestions for getting a group started, appropriate and meaningful topics for group discussions, pragmatic ways to facilitate these discussions, and resources that provide practical information and activities**.**

I.4 Debra Mishak; Paula Christensen. ***Lessons from the Field: Listening to the Gifted*** **(I.4)** Gifted education licensure and endorsement coursework and criteria vary widely from state to state and country to country. Consequently, teachers of the gifted enter the field with significantly different knowledge and skill sets. As educators who provide gifted coursework in traditional, hybrid and online formats throughout the U.S. and internationally, the presenters are acutely aware of how exciting, and at the same time how challenging the transition to gifted education can be. While identification and programming knowledge are important, gifted teachers in training continually express concern regarding their ability to effectively address the social and emotional characteristics associated with giftedness that often sabotage a gifted person's academic, career and personal success. This session will review the skills necessary for listening with empathy and understanding, and for sifting through what the gifted say to better understand the meaning behind their words. The work of Drs. Cross, Gentry, Hebert, Sunde-Peterson, and Webb will frame the discussion, and instructional strategies, listening prompts, stories and case studies will be shared. Adequate time will be given to address specific questions and concerns of the audience.

I.17 Kuen-shouh Wu; Shu-Fen Wang. ***A Study on Pro-Social Behaviors of the Gifted Students in Taiwan*** **(I.17)** The purposes of this study was to examine the pro-social behaviors of gifted students in Taiwan and the attitudes of their teachers and parents. Through a cluster sampling, the subjects were recruited from the north, central, southern and eastern of Taiwan. There were 1054 gifted students, 916 parents and 214 teachers recruited to participate in this study. The findings of this study are shown as follows: (1) The gifted students' willingness to engage in pro-social behaviors was higher than the mean scores. Their practice of pro-social behaviors, however, was lower than the mean scores; (2) Their teachers and the parents supported their pro-social behaviors; (3) The gifted female students' pro-social behaviors were significantly higher than the gifted male students both in willingness and practice; (4) There were no significant differences both in willingness and practice of pro-social behaviors among elementary, junior and senior high school gifted students; and (5) There were significantly positive correlations between willingness and practice of pro-social behaviors.

I.18 Jane Farias Chagas Ferreira. ***Hannah: A Case Study of Resilience*** **(I.18)** A case study was done with young gifted girl, in order to identify continuities and discontinuities in the development of her potential throughout the life course. The results demonstrated that several psychomotor, sensory, intellectual, imaginative and emotional characteristics prevail during childhood and adolescence up until early adulthood. Among the continuities that were observed the

following showed up: higher academic skills (fluency reading, easy to learn, learning new languages, complex analytical mind and higher scores in school exams); difficulties in interpersonal relationships; perfectionism; multiple interests; competitiveness among peers and sensitivity to certain types of food and noise. Hannah had an outstanding academic trajectory receiving scholarships and awards in various competitions at state and national levels. Nevertheless, she was a victim of bullying, the target of slurs, derogatory nicknames and criticism by her classmates. These facts made the school a contradictory environment in relation to the development and encouragement of her potential while it was a promoter of psychological distress. Entering adolescence intensified episodes of suicidal ideation that culminated in an attempt at the age of 14 years. Religious experiences, family dynamics, fraternal relationships and parental motivational practices of autonomy and responsibility were factors protective of psychological distress. The University entrance and diagnosis of giftedness were decisive for self-knowledge, recognition of skills and her successful integration in the labor market. Currently, Hannah has a promising career related to Strategic Intelligence and Foreign Trade. Between discontinuities, the way she reacted to the provocations and competitiveness among peers and the new direction of her perspectives on the future will be discussed.

J.3 Sylvia Rimm. ***Dr. Sylvia Rimm's "Top Ten" for Preventing and Reversing Underachievement*** **(J.3)** As a result of my more than 30 years as a psychologist directing Family Achievement Clinic, 15 years answering questions on public radio, and 9 years advising parents on the Today Show, 20/20 and Oprah, I target ten areas for assisting parents and educators in preventing and reversing underachievement for gifted children. I will give practical strategies for avoiding problems and correcting them at home and in school. Advice includes everything from how to develop a child's achieving persona, how to advocate for positive and more challenging curriculum in the classroom, to how to help gifted students balance academics and social life. My practical strategies for both parents and educators will be given in the following ten areas: (1) Setting high, but not too high expectations; (2) Developing a work ethic that shows the relationship between effort and outcomes; (3) Learning competitive resilience with both siblings and peers; (4) Coping with learning disabilities and/or attention problems; (5) Matching curriculum to provide appropriate, but not too much challenge; (6) Selecting healthy peer environments; (7) Developing united parenting strategies; (8) Positive advocating for teachers and schools; (9) Finding and being appropriate role models; and (10) Establishing reasonable balance between achievement and social activities. Educators and parents working together can make the difference in encouraging gifted children to work to their potential in school and life.

J.4 Sylvia Rimm. ***Helping Anxious Gifted Children Reverse Underachievement and Build Confidence*** **(J.4)** Intensity and sensitivity are characteristics of giftedness that can lead children to anxiety and perfectionism. Parents and educators can help these children overcome their anxieties. They can accelerate their too careful work, encourage them to take challenging opportunities and insist they gradually move forward to creativity, success and fulfillment. Caring parents and teachers who cater to children's oversensitivity may unintentionally reinforce their avoidance of challenge. Perfectionistic children often spend hours overdoing already excellent work to avoid completing other assignments that feel threatening. These children may convince teachers to excuse them from assignments claiming boredom instead of confessing the fears they feel. Their tears and fears prevent teachers from giving even positive criticism. Special programs that make too many exceptions for their anxieties can prevent these children from discovering their capabilities. They may receive more help than they require, thus decreasing their confidence and increasing their dependence. It's difficult for sensitive parents and educators to respond counter intuitively to these anxious children because it feels uncaring to them. Nevertheless, for their children's sake, adults who guide them must hold the goal of achievement and self-efficacy in mind as they help them struggle toward building confidence. If adults steal their struggle, they'll also steal their self-confidence. Teachers will receive practical suggestions for how to encourage these children to speak up in class, cope with mistakes, work independently, enter competitions, take risks in writing, think creatively, avoid procrastination, learn to accept criticism, and learn to cope with their own oversensitivies by productive engagement.

K.10 Susen Smith. ***The Missing Link: Seeking Support for Gifted Underachievers Through Innovative Teaching Practices within Creative Learning Environments*** **(K.10)** This paper and presentation reports part of a study that explored Australian teachers' views on effective differentiated teaching across a variety of educational contexts, for effective learning for underachieving gifted students. Gifted students can underachieve when their gifts are not recognized, or are masked by some other factors, such as learning difficulties, attitudes, dysfunctional perfectionism or an undifferentiated curriculum. Differentiating teaching utilizing a myriad of effective interconnected best practice strategies, within theoretically supported processes, can help to overcome gifted underachievement. Underpinned by

theoretical support, surveys and interviews, teachers recommend a series of teaching strategies across a variety of learning environments to support academic achievement of gifted students. Teachers' perspectives of the social and affective needs of gifted underachievers are also explored. While a number of apprehensions were raised, teachers identified specific strategies to nurture specific affective needs of underachievers. Specific affective aspects included the impact of the 'forced choice dilemma', the link between unrealistic expectations and the need for goal–setting and avoidance actions that may impede progress. The link between these affective needs and promoting achievement is examined further in this study. One component of the differentiated curriculum that is often neglected is how teachers can access 'support structures' to support gifted students. Utilizing a variety of educational environments and creative resources can provide this missing link. Finally, teachers reiterated their concerns regarding differentiating teaching for gifted students in the regular classroom and provided specific recommendations for on-going teacher professional learning to support gifted students in current educational environments.

K.7 James T. Webb; Arlene DeVries; Rosina Gallagher. ***SENG Mode Parent Support Groups*** **(K.7)** Parents of gifted children need (and desperately want) settings to interact with other parents and to receive support, guidance and advice, and the issues involved in parenting gifted children transcend cultures and social classes. Currently, SENG model parent groups are being successfully implemented throughout the United States and in several other countries. The SENG model provides support and guidance that facilitates parental understanding and parenting skills in ways that will nurture the emotional development of gifted children and their families. The model is structured so that SENG discussion groups can be established in various locations in various countries, and an intensive two-day training in facilitating SENG Model Parent Groups (SMPG) is being held at the beginning of this WCGTC conference. Because participation in that training session was quite limited, the present session will provide a briefer experience and summary, but one that will allow participants to consider implementing the SMPG model in their own locations. This session will describe the purpose and structure of the groups, as well as specific facilitator skills and content that are used in the SENG model. Demonstration and role-play will be used to model the techniques and approaches used by SMPG facilitators.

K.8 Lisa Van Gemert. ***Forget Your Perfect Offering: Perfectionism & the Gifted Learner*** **(K.8)** Perfectionism is the gifted person's disease. It paralyzes youth and adults alike, hinders academic risk-taking, and damages relationships as well as performance. Virtually everyone working with the gifted will face this issue, and it is vital that we have the skills and tools to help youth tame their perfectionistic tendencies or they will find themselves tormented by self-doubt and insecurity. This session will share the roots of perfectionism and specific strategies parents, educators, and other practitioners can use to help gifted youth (and adults) overcome it. By exploring not only the faces of perfectionism, but also the effective techniques to master it, this practical yet research-based session will allow participants to discover what Odysseus has to teach us about letting go of perfect, the secret power of the number 99, and what Amish quilters know that can help.

K.9 Lisa Van Gemert. ***Lit from Within: Internal Motivation & the Gifted Learner*** **(K.9)** Underachievement on the part of gifted students creates tension and stress for all concerned. Although it may be impossible to tease apart all of the causes, clearly a lack of intrinsic motivation is one of its facets. Where does this come from? Why do some students lose their learning drive? And more importantly, what can be done about it? This information and strategy-dense session will share some of the most common causes and fixes, including some that will surprise participants. They will learn the evolution of our understanding of what motivates us, how to use reward effectively, why a little stress is actually good for students, and the power of grit (and how to get it). Discover the secret type of optimism that is effective in the pursuit of a long-term goal. Uncover the mystery of what a centuries-old math problem has to teach us (and our students) and the tips and tricks every teacher and parent needs to know to help children and teens become motivated on their own.

T.8 Joan Franklin Smutny. ***Supporting Gifted Girls (K-6): Strategies for Addressing Underachievement*** **(T.8)** Despite the significant strides women have made world-wide, gender stereotyping, socialization, and peer pressure still exert a powerful influence on gifted girls. Designed for teachers, counselors, and parents, this session aims to give participants an understanding of the scope of underachievement in this population and offers practical guidance in detecting and responding to the early signs. It demonstrates a range of rich resources and strategies in the area of instruction and advocacy that build self-esteem and support the early growth of gifted girls. Emphasis will be placed on challenging old mindsets about gender in the classroom, school, and home through exposure to the lives of girls and women in a variety of roles and fields.

14 – TWICE-EXCEPTIONAL LEARNERS

H.7 Anies Al-Hroub. ***Cognitive Characteristics of Mathematically Gifted Children with Learning Disabilities*** **(H.7)** The main purpose of this research was to analyse cognitive factors characterizing 'mathematically gifted students with learning difficulties' (MG/LDs). Thirty MG/LDs students and 22 "intellectually average students with learning disabilities" (Average-IQ/LDs) administered the WISC-III-Jordan. The two groups, aged between 11 and 12 years, were chosen from three public elementary schools in Amman, Jordan. While differences between the two groups were investigated, a comparison of 17 factors was made using five cognitive classification systems: Wechsler (1974 and 1991), Horn (1989), Bannatyne (1974), Kaufman (1975 and 1994) and Rapaport, Gill and Schafer (1945-1946), in addition to the ACID profile. The findings revealed that the MG/LDs sample demonstrated a significant discrepancy between the verbal and performance IQ subscales, but no significant scattered subtest profile was yielded. The analysis of the cognitive systems revealed that the Rapaport et al. (1945-1946) and Kaufman (1994) models were the most powerful for discriminating between the two groups.

H.8 Besnoy, K. D.; Swoszowski, N. ***How Do I Advocate for My Twice-Exceptional Child?*** **(H.8)** Successfully advocating for a twice-exceptional child requires parents to communicate with school officials, demonstrate knowledge about federal education legislation, and involve the child in extracurricular activities. For many parents, this process can be intimidating and overwhelming. However, many times, events happen that serve as 'catalysts for advocacy' that requires parents to actively engage in the advocacy process. As are result, researchers were interested in the events that prompted parents to advocate for their twice-exceptional child. Researchers recorded and evaluated the advocacy experiences of parents (n = 8) of elementary age children as they navigated the special and gifted education referral, identification, and services processes. Following general qualitative methods, researchers individually analyzed and coded interview and focus group data. Next, researchers compared initial codes and reached consensus regarding final codes. All children in the study (n = 6) were twice-exceptional (n = 4: Autism Spectrum Disorder, n = 1: Non-Specific Visual-Spatial Learning Disability, and n = 1: Obsessive Compulsive Disorder). Researchers conducted semi-structured, individual interviews with each parent(s) as well as two whole-sample, focus groups concentrating on referral, identification, and services. Three themes emerged that researchers described as 'catalysts for advocacy': (a) general distrust of school system, (b) disparities in parental knowledge regarding desired services and the rationale for these desired services, and (c) limited knowledge regarding available resources and supports. Attendees of this session will receive tips on how to be a better advocate and suggestions on how to navigate and advocacy process.

H.9 Diane M. Kennedy; Rebecca S. Banks. ***Bright Not Broken: Why Twice-Exceptional Children are Stuck and How to Help Them*** **(H.9)** Traits of giftedness and disability are often misunderstood in 2e children, heightening the importance of the whole child approach. This presentation examines the current diagnostic system (DSM), how it impacts understanding and treatment of the 2e child, and the need for all kinds of minds in our world today Unfortunately, gifted behaviors are often mistaken for those associated with ADHD, Asperger's/autism, and related conditions. Consequently, confusion between traits of giftedness and traits of disability often leads to misdiagnosis, missed diagnosis, and even missed giftedness in 2e children. Much of this confusion stems from the DSM, which rarely accounts for higher IQs in its descriptions of disorders and pathologizes many gifted behaviors. Only when the many factors that underlie a child's unique intensities are understood as expressions of giftedness, rather than being viewed as traits of disability can parents and professionals more deeply appreciate and effectively support the whole child. As Dr. Temple Grandin explains, a successful outcome for the individual child and society as a whole depends upon valuing all types of minds, taking a whole child approach in which all interventions, therapies, and education are undertaken with the goal of cultivating the wonderfully original talents and abilities in 2e children.

H.10 Rosina M Gallagher. ***Gifted and Dyslexic: A Paradox?*** **(H.10)** Can giftedness and dyslexia coexist in the human brain? Is dyslexia limited to a reading disorder? Is it an enduring condition that can be rarely overcome? The term stealth dyslexia, first coined by researchers Brock and Fernette Eide, aptly describes the subtle condition that may be responsible for underperformance in some gifted learners. Goals for this session are to review causes and misconceptions about dyslexia, describe basic presentations that may occur singly or in combination, discuss predictors of early reading difficulties, and explore ways to work with gifted children who manifest dyslexia-related symptoms. Dyslexia was first recognized in the late1890s as a reading disorder indicative of low intellectual ability. Increased research, personal experience and legislation now affirm that dyslexia, "a neurologically-based, often familial disorder which interferes with the acquisition and processing of language," can be hidden and common

among the gifted and talented. Neurologists researching reading disorders have shown that, in dyslexic readers, a front part of the brain is over-stimulated while crucial portions in the center and back are under-stimulated (Sally & Bennet Shaywitz). Thus, dyslexia is not the result of limiting conditions such as sensory impairment, inadequate instructional or environmental opportunities, or lack of motivation, but may occur together with these conditions. Dyslexia may affect receptive and expressive language to varying degrees, especially in reading, writing, spelling, handwriting, and sometimes in arithmetic. Dyslexia may also affect language processing and memory and the development of fine motor skills. Among the gifted, dyslexia may be subtle or stealthy and difficult to detect because gifted children are able to use strong higher-order language skills to compensate for low-level deficits in auditory and visual processing and to read with relatively good comprehension (Brock& Fernette Eide). Although dyslexia endures through life, individuals with dyslexia frequently respond successfully to timely and appropriate intervention. Current literature documents stories of individuals in all realms of human endeavor who have succeeded in developing their condition to an advantage. (Thomas West, Brock & Fernette Eide, Ronald Davis & Eldon Braun, G. Sagmiller).

J.11 Liang Jialing. ***The New Attempt – Art Talent and Styles of Performance of Students with Asperger's Syndrome*** **(J.11)** In 2012, I was invited by Professor Kuo (Director of Department of Special Education, National Taiwan Normal University) to be an instructor of 'Young Artists with Asperger's Art Creativity Course'. It was really a new experience for me to teach the students who are exceptional; and for those students, it was a good chance for them to attend a university course. 'Young Artists with Asperger's Art Creativity Course' was an eight-class curriculum; I arranged the following courses for my students: 1.Inner landscape painting. 2. Helmets design 3. The surrealism's small theater. 4. Woodblock Printmaking (e.g. Libris making). 5. "Art Museum" in the classroom. 6. Oil painting in campus. 7. Flowers still life painting. 8. Mosaic tiles. And this article presents the performance of three teenage boys' creative process in the class. I will choose three classes to analyze respectively and share with the readers that their learning styles and talent performance from their outstanding works which were completed in this course.

J.12 Nielsen Pereira; Julia Roberts; J. Dusteen Knotts. ***International Perspectives on Twice-Exceptional Learners: Recognition and Services*** **(J.12)** A questionnaire was distributed to gifted specialists in a sample of countries to gather information about what are the laws, policies, and practices with regard to recognizing and providing services for children who are gifted and talented and also who have one or more disabilities. Results of a similar survey in the United States will be compared with the international findings. This session will report the findings and discuss twice-exceptional learners with others who are interested in this group of children.

J.13 Shu Min Wu. ***The Talent Development, School Adjustment, and Support System of an Asperger Academic Gifted Student*** **(J.13)** This presentation discusses a twice-exceptional student with Asperger's and math talents who had been assessed as academic gifted by an identification committee members on gifted students. The student completed a program for junior high gifted students, was reassessed to be academically gifted upon entering senior high school, and is now attending academic gifted classes at his school. Our qualitative research on the development of talents and school adjustment explores the experience and current status of twice-exceptional students. We carried out semi-structured interviews and in-class observation with several main caregivers, instructors, school administrators, teachers of gifted program, reviewed a collection of related documents, works, and videos, and interpreted the information using qualitative analysis. The researchers considered the factors that influenced the development of talent development, school adjustment, and support systems. The study concluded with suggestions for parents of twice-exceptional students, school administrators, and teachers and for future research.

J.14 Terence Paul Friedrichs; Luke Moe. ***Traits and Educational Approaches for Gifted ADHD Youth: The Literature - and One Student's Life*** **(J.14)** Gifted students with attention deficits may be growing in number (Kalbfleisch, 2013). However, this group has consistently displayed certain academic and interpersonal traits since its first prominent appearances in the gifted and ADHD literature in the 1980s (Barkley, 1989; Maker, 1982). In the first of two segments, the adult presenter explains the 10 most-commonly-seen gifted ADHD traits, drawing on a content analysis of both gifted and ADHD literature from the past 25 years. He also describes the 10 most-frequently-noted, empirically supported, and educator implemented academic and social/emotional approaches for common gifted ADHD traits. The second segment brings these traits and approaches to life. The youth presenter, a Youth-Division Emmy-Award-winning student with ADHD, uses his strong visual- and social-media skills to convey his personal experiences with gifted ADHD characteristics and effective (and ineffective) educational approaches. ADHD prevalence in America,

according to many estimates, is around ten percent of the population (CHADD, 2013). If school-identified gifted students constitute about six percent of the U.S. population (National Center for Education Statistics, 2011), and if ten percent of gifted youth have attention deficits (Moon, 2002), then there may be approximately 300,000 U.S. gifted-ADHD students (Friedrichs, 2013). Educators , therefore, need to understand gifted ADHD traits to begin appropriate identification and service for this large student group (Baum & Olenchak, 2003). To be truly effective, though, these teachers also must know how listed characteristics actually play themselves out in the lives of *individual* gifted ADHD students, like the youth presenter (SENG Board's ADHD Project, 2013).

K.3 Diane M. Kennedy; Rebecca S. Banks; M. Layne Kalbfleisch. ***Twice-Exceptionality from Multiple Points of View: Making Sense of New Information and Charting Research-based Practice*** **(K.3)** Traits of giftedness and of disability can be misunderstood by parents and teachers alike and are often difficult to dissociate in 2e children, heightening the importance of the whole child approach both in autism diagnosis and in planning for intellectual and social intervention. In certain types of gifted children, outward behavior can be hard to determine when associated with ADHD, Asperger's or other aspects of the autism spectrum disorder. This panel presentation incorporates the experiences, research, and perspectives of three individuals who span the roles of parent, author, teacher and researcher. We address topics that include how to best support the talents of twice exceptional children in school to help them transition into meaningful careers and consider the first neuropsychological model to characterize children with high-functioning autism and Asperger syndrome. This panel will connect emerging research evidence with the practical environment, to consider aspects of executive function that may be protected by intelligence and used as the basis for remediation and growth in the classroom and other social environments. Only when the many factors that underlie a child's behaviors are more clearly associated with or understood as possible expressions of giftedness, rather than just as primary traits of disability, can parents and professionals more deeply support the whole child and help 2e children to reach their full potential.

K.4 Echo Wu; Meg Crittenden. ***Supporting Twice-Exceptional Children and Families: What Principals and Teachers Should Know*** **(K.4)** Twice-exceptional (2e) children refer to those who are intellectually gifted and at the same time, being diagnosed with one or more learning, behavioral, and physical and/or psychological disabilities. Some of these disabilities may include ADHD, dyslexia, autism, OCD, behavioral disorder, and Asperger syndrome. It is estimated that there are approximately 300,000 2e students in the United States (Baum & Owen, 2004). Under a traditional learning environment, 2e children may encounter various problems and can easily underachieve without appropriate support from school and home. Although special needs of 2e children have been increasingly recognized throughout the country, research indicates that there is a lack of effective accommodation and intervention from educators for these children, and only a handful of schools in the US offer a curriculum specifically tailored to 2e children (Nicpon et al., 2011). School administrators and teachers need to know more about effective identification and academic interventions for 2e students. This presentation will summarize the best practice from existing literature and discuss what principals and teachers should know and do to help this special population. Attendees will leave with leading-edge information and practical strategies to readily offer services to 2e students at their school.

L.7 Diane Montgomery. ***Dual Exceptionality and Underachievement: Dyslexia in Gifted Girls; Different Needs?*** **(L.7)** Significant numbers of student teachers and graduate teachers on MA Dyslexia and SEN programs were found to be dyslexic. Only about one in five had a formal diagnosis. Typically they had residual spelling problems and a history of underachievement in contrast to their high ability. Their case histories showed five patterns of difficulty and a particular personality profile that enabled their post school achievement. A series of analyses of essay writing in school Years 5, 7 and 9 was undertaken to compare girls with boys' performance now in motor skills and spelling (N=870; Montgomery, 2008). The results showed a ratio of 1.5 to 1 boys to girls with dyslexia indicating lower identification of girls' problems since Rutter et al (1970) first identified the ratio of 4 to 1 boys to girls. To try to identify dyslexic girls very early and on a more equitable basis the development of writing and 'marks on paper' of boys and girls in 8 Reception classes were analyzed. Although overall, girls' skills in writing and spelling were significantly more advanced than boys', similar numbers were shown to be candidates for dyslexia and interventions to support them were developed (2012-3). These recent results and a later follow up study will be discussed.

L.8 Kao Min-Chi. ***A Study of Science Education Experiences of Hard of Hearing Students with Double Exceptionality*** **(L.8)** The purpose of this study is to explore the science education experiences of hard of hearing students with double exceptionality and the issues and challenges faced by teachers in developing instructional strategies for use in educational science activities and experiments. The literature in support of the mathematics and science practices

was reviewed and two gifted hard of hearing students were selected as participants of this study. Next, qualitative research was conducted through semi-structured in-depth interviews and a narrative analysis framework was adopted to analyze the difficulties experienced by participants and teachers. It was determined that the teacher needs to help gifted hard of hearing students identify what they are about to learn because of their missing auditory information, even if the students have excellent inductive reasoning and rich prior knowledge. Although the effect of using cognitive conflict strategy on conceptual changes is positive, some hard of hearing students were confused when missing speech information. Some suggestions were presented to accommodate the difficulties. The study concludes that far more work will need to go towards improving the science education experiences of gifted deaf and hard of hearing students.

L.9 Kuang Chingchen. ***Drawings by Ji-Sheng Who Has Asperger Syndrome*** **(L.9)** This article presents a series of pictures that were drawn by a teenage boy, Ji-Sheng, who has Asperger syndrome. The pictures were completed over the course of a semester-long weekend artistic program for exceptional needs students in National Taiwan Normal University. The art work consists of drawings, print making, mask design, and Chinese painting. These images are a pictorial manifestation of visual realism and a representation of the third dimension. His excellent fine motor coordination, visual-spatial skills, and extraordinary interest in old town reinforce his emphasis on the outlines and linear qualities of the images.

L.10 Kuo Ching-Chih. ***An Enrichment Program for Young Artists with Asperger's Syndrome*** **(L.10)** An enrichment program was started at National Taiwan Normal University for young artists with Asperger's syndrome in fall 2012. Besides the art course, music and dance therapy courses were added in spring 2013. Three artists joined in 2012 and two more artists joined in 2013. Leland is a gifted individual whose art has been exhibited in many cities like New York, Prague, Paris, and Beijing. A colorful small house exhibiting his creations has been placed at NTNU for students to interact and share class information. Ji-Shen is best known for detailed illustrative work on traditional architecture of Taiwan's retrocession, like street landscape, shops, stations, peddlers, and pulled rickshaws in the 1940s and 1950s. His art shows great interest in both history and social concern. Lemon is a poet and artist. His narrative poems combined his interests in Chinese literature and general knowledge of Japanese literature; his painting shows an unusual aptitude for art even though he started painting one year ago without a teacher. Hwa-Shang is good at drawing cartoons and design. Her favorite is a cartoon series about cats, rich in content and narrative design. Wan-Ting loves ceramic and painting. In her selection of pottery sculpture, the simple shapes and wavy lines produce an abundance of the pose and facial expression of the figure. She also creates rich paintings filled with joyful colors and naughty elements, enjoying herself when she can paint. Their art works and learning characteristics will be introduced and three students and three parents will share their experiences.

15 – SYMPOSIA

(For more details, see the conference website: www.worldgifted2013.org)

Symposium (1) *Illuminating Lives: Key Figures in Gifted, Talented and Creative Education* Todd Lubart; Ann Robinson; Leonie Kronborg (Symposium (1), August 11: 10:15-12:00)

Symposium (2) *Annemarie Roeper: Reflections on a Global Visionary* Ellen Fiedler and Michele Kane (Co-Chairs); Presenters: Anne Beneventi; Abbey Cash; Patricia Gatto-Walden; Barbara Mitchell Hutton; Kathi Kearney; Karen Mireau; Marcia Ruff; Linda Silverman; Stephanie Tolan and Noreen Ward (Symposium (2), August 11: 10:15-12:00)

Symposium (3) *Misdiagnosis and Dual Diagnoses of Gifted Children and Adults* James T. Webb; Marianne Kuzujanakis; Rozina Gallaher; Stephen Chou (Symposium (3), August 11: 10:15-12:00)

Symposium (5) *Asynchronous Development Revealed* Christine Neville; Stephanie Tolan; Patricia Gatto-Walden; Ellen Fiedler; Michele Kane; Barbara Mitchell Hutton; Shelagh Gallagher; Anne Beneventi; Kathi Kearney; and Linda Silverman (Symposium (5), August 11: 13:00-15:00)

Symposium (6) *Identifying Twice Exceptional (2e) Students in America's Schools* Barbara Gilman (Chair); Presenters: Megan Foley Nicpon; Ed Amend; Sylvia Rimm; Karen Rogers; Kathi Kearney; Linda Silverman; Mike Postma (Symposium (6), August 11: 13:00-15:00)

Symposium (7) *Teacher and Student Perspectives of Curriculum and Classroom Practices, which Engage Highly Able Students: What Does the Evidence Reveal?* Leonie Kronborg; Margaret Plunkett; Toni Meath (Symposium (7), August 12: 10:15-12:00)

Symposium (8) *Dabrowski's Theory of Positive Disintegration: A Process of Development* Michele Kane (Chair); Presenters: Janneke Frank; Patricia Gatto-Walden; and Linda Silverman (Symposium (8), August 12: 10:15-12:00)

Symposium (9) *The Edna McMillian Scholarships celebrating- 'Passion, Profession and Parents that Inspire* Leslie Graves and Dorothy Sisk (Co-Chairs); Presenters: Jen Torbeck-Merril; Mary St. George; Lisa Conrad; Carolyn Kottmeyer (Symposium (9), August 12: 10:15-12:00)

Symposium (10) *Talent Development of Young Artists with Asperger's Syndrome* C. June Maker (Moderator); Ching-Chih Kuo; Ching-Chen Kuang; Jia-Ling Liang (Symposium (10), August 12: 13:00-15:00)

Symposium (11) *Building a Family Support Network* Bo Andersen; Ole Kyed; Peter Grubert; Annette Ibsen (Symposium (11), August 12: 13:00-15:00)

Symposium (12) *What Works? A Dialogue on Effective Advocacy for the Gifted* Bo Andersen; Josephina Lee; Janeke Frank; Leslie Graves (Symposium (12), August 12: 13:00-15:00)

Symposium (13) *Creativity and Specific Domains: Research on Verbal, Mathematical, and Scientific Creativity* C. June Maker; Abdulkadir Bahar; Sonmi Jo (Symposium (13), August 13: 13:00-15:00)

Symposium (14) *The Study of Spiritual Pathfinders to Inspire Gifted Students to Make a Difference* Dorothy A. Sisk; Gillian Ericksson; Hava Vidergor; Kevin Lamoureux; Sonia White; Eunice M. L. Soriano de Alencar; and Shoshana Rosemarim (Symposium (14), August 13: 13:00-15:00)

Symposium (15) *State Residential Schools of Mathematics and Science* Julia Link Roberts (Moderator); Tim Gott; Corey Alderdice; David Williams; and Jay Thomas. (Symposium (15), August 13: 13:00-15:00)

16 – POSTERS

P.1 Suvimon Charoonsote; Konita Koeiniyom. ***Model of a Special Class for the Development and Promotion of Science and Mathematics Abilities of DPST Students at the High School Level*** **(Poster.1)** The Institute for the Promotion of Teaching Science and Technology (IPST), under the Ministry of Education, has long emphasized the importance of developing a new generation who has great skills in science, mathematics, and technology. The Development and Promotion of Talented Science and Technology Scholarship Project (DPST) was established in 1984, and aims to support and encourage young children with potential to study science towards the highest levels. Its mission is to produce young scientists who are capable of doing scientific research. All DPST scholarship students were chosen from Matthayom 3 students (grade 9) all over Thailand through achievement tests, creativity and problem solving tests, and aptitude examinations. The qualifying students went on to study in Matthayom 4-6 (high school level) at 10 DPST high school centers in Bangkok and other regional provinces. IPST created a special program to develop and promote their ability. The learning times of DPST students are shorter than normal students, so they could spend their spare instructional time in enrichment programs that focus on the students' capabilities to become good scientists. In addition, the extension curriculum is arranged for in-depth learning. Mentors are provided to give advice and assist in training and performing science and mathematics projects. Furthermore, the enrichment programs provide many activities that allow students to develop and improve their research skills and scientific thinking, and also promote the right scientific attitude.

P.2 Denise Zigler. ***NASA Balloon Powered Car*** **(Poster.2)** The primary learning outcomes: (i) The learner will be able to increase their understanding of and comfort with the nature of science and the scientific process through the context of an interesting real-world scientific interactive hands-on lesson; (ii) The learner will examine Newton's 2nd and 3rd Laws through the creation of NASA Balloon Powered Cars; and (iii) The learner will examine NASA teacher websites. The presenter will share with teachers a power-point lesson/hand-out on NASA Balloon Powered Car that can be used

with gifted learners, describing the step-by-step process of how to create a NASA Balloon Powered Car. Following the power-point demonstration, and examination of Newton's 2nd and 3rd laws, teachers will create their own NASA Balloon Powered car. This session seeks: (a) For participants to use the materials/ideas provided in this session to differentiate and use with gifted students. Teachers will exam NASA websites to use in their classroom; and (b) To investigate Newton's third law of motion by providing a hands-on lesson for teacher involvement-NASA Balloon Powered Cars, in which teachers can implement into their curriculum and use with diverse learners. The content in this session consist of teacher participation in hands-on activities, visual demonstrations, and power-point demonstrations. Handouts will include NASA Balloon-Car materials.

P.3 Fernanda do Carmo Goncalves; Denise de Souza Fleith. ***Comparative Study between Gifted and Non-gifted Students with Respect to Intelligence and Creativity*** **(Poster.3)** A comparative study was conducted between gifted and non-gifted students in relation to creativity and intelligence. The aims of this research were: to investigate if there is a relationship between creativity and intelligence in gifted and non-gifted students; to investigate if there is any significant differences in creativity and intelligence among gifted and non-gifted students; to investigate if there is any significant differences in perception of classroom creativity climate among gifted and non-gifted students, and to investigate the perception of the gifted and non-gifted students regarding intelligence and creativity. The study had the participation of 21 gifted students and 27 non-gifted students in 6th grade. The results indicated that there was no relationship between intelligence and creativity between the two groups. Differences were not observed among gifted and non-gifted students in relation to their intelligence. However, with respect to the creativity, the results indicated significant differences in the verbal and figurative originality. The gifted students presented higher scores when compared to the non-gifted students. The perception of classroom creativity climate was measured through the factors. Results of t-tests indicated significant differences between the two groups in factors about perception of climate of the classroom. The gifted students presented a more positive perception when compared with non-gifted students. Two gifted and non-gifted students were also interviewed with respect to the themes intelligence and creativity. Perception of differences were marked between the two groups regarding the intelligence definition and importance, and self-perception in relation to their own intelligence.

P.4 Liliane Bernardes Carneiro, Denise de Souza Fleith. ***Eminent Brazilian Researcher: Career Development and Achievements*** **(Poster.4)** The purpose of this case study was to present the life-span of a Brazilian eminent researcher – childhood, adolescence, and youth – comparing cognitive, personality and creative characteristics, personal and professional experiences, as well as achievement and productivity, to the literature about giftedness in order to identify factors that might have contributed to his eminence in different areas of knowledge, especially information science and poetry. The data was collected through semi-structured interviews, exchanges of correspondence (by e-mail),documentary analyses on the Internet, including the researcher's web page of poetry, and analyses of his publications - autobiography and poetry book. The results suggested evidences of gifted behaviors over the life of the Brazilian researcher. The development of his potential was related to factors such as opportunities in social, cultural and historical contexts, as well as high intrinsic and extrinsic motivation. Keywords: Giftedness. Creativity. Life-span.

P.5 Mary Whitman. ***Mirror: Seeing Yourself thru Bibliotherapy*** **(Poster.5)** When Robert Frost said, "A poem begins in delight and ends in wisdom," he may have hoped that his readers would enjoy the process of self-discovery. Gifted students often carry more than their share of emotional issues, be it wrestling with their own identity or managing their sensitivities to the cares of the world. When given a safe setting to see these tendencies in themselves, they can go on to value their strengths, and receive support and affirmation. Gifted individuals' social and emotional concerns are effectively addressed through many practices. Bibliotherapy, as a strategy, uses literature and other media to guide students in considering developmental topics, in addition to delicate, life-altering issues. Aristotle described the process as one where the individual sympathizes with a tragic hero, releases emotions, and thereby, senses a cleansing—hence the Greek word, catharsis. These principles are true for our modern everyday dramas, too. Themes described in literature, and the self-discoveries made during guided discussion, can be referred to later when students have their own experiences with such trials. This poster session will provide participants with an opportunity to sample bibliotherapy, to understand the goals, and to learn its applications. With guidelines for how to create a safe and supportive atmosphere, choose appropriate books (literature, films, song lyrics, etc.), and craft the all-important questions, caring adults can facilitate students' journies through the process of self-awareness and identification with others. We are not alone as we face life's ups and downs. In my graduate course work with Dr. Carol Schlichter, I focused my research on bibliotherapy, culminating in presentations at the state and national level. It is one of those ideas that can be implemented quickly and inexpensively with the right training.

Although the term was first used in 1930 in regard to applying literature to treat the mentally ill, and librarians have been "prescribing" books to their patrons for years, it remains a "best kept secret" in the classroom setting. The results of bibliotherapy can have a significant impact on an individual and a group, with a support system developed through open and respectful dialogue. It is my passion to help teachers, as well as students, experience self-discovery.

P.6 Mary Whitman. ***My Story. Our Art. Your Truth*** **(Poster.6)** Although gifted and talented students are said to be "as well adjusted" as other student groups (Reis & Renzulli, 2004), they often face additional risks to their social and emotional well-being. A variety of tactics can address these issues such as an effective curriculum, counseling in small groups or with individuals, and specific strategies like bibliotherapy. To meet the needs of artistically talented youth in particular, an innovative idea combines bibliotherapy with Schoolwide Enrichment Model's Type III activities. This poster presentation provides tips for practical application of bibliotherapy (using literature and media to draw participants into a deeper understanding of issues in their own life); and, describes ways students can create in-depth products that employ original, artistic expressions to communicate their point-of-view regarding a personal or developmental topic. This validates their own journey of self-discovery while laying a path for others to follow. Through the direction of caring teachers, students tap into their altruistic nature by crafting questions necessary for catharsis. Bibliotherapy, in a safe and supportive environment, opens doors for intra and inter personal growth. At the end of this session, attendees will be able to reflect on the significance of bibliotherapy, to recognize certain student groups who will aptly connect with this model, and to realize a greater appreciation of the use of media in meeting social and emotional needs. Sample lesson plans will be supplied to show how students identify a theme they wish to address, and create their own media (literature, drama, art) in conjunction with developing questions to engage participants in discussion. Through telling their story and creating art, new truth is unveiled and authenticated.

P.7 Patti Garrett Shade; Richard Shade. ***Concrete Creativity A Curricular and Instructional Framework that Integrates Creativity into all Teaching and Learning!*** **(Poster.7)** For years we've struggled with the demands of standards and lost a bit of our enthusiasm for teaching. Want to have fun again and create an environment of rigorous learning and engagement? We all love teaching creatively but needed tools to integrate it into our standards-based classrooms. Many schools in countries around the world "are now focusing aggressively on turning their schools and industries into hotbeds of creativity, imagination, and innovation - the areas in which economies will win or lose" (Results That Matter, 2006). Yet, creativity is still viewed by many, as a complex and elusive phenomenon. To be viewed as an essential and recognizable component, creativity must be strategically embedded into curricular design. This requires a meaningful and practical support structure. It's not changing what you teach; it's tweaking how you teach. Explore the framework pieces developed by teachers to teach Concrete Creativity: Creativity Curriculum Organizer, Creativity Curriculum Fan, Creativity Lesson Planner, Creativity Scope and Sequence, Creative Problem Solving Cards – key pieces that make creativity a part of all standards-based content instruction. Creativity provides students with interesting and unusual ways to learn, and teachers with new instructional techniques. All learning involves processing, persistence, and productivity. Creative learning also requires understanding the roles of perception, passion, person, and press. Each of these seven components of the Creativity Fan Model have associated attitudes, abilities, and teacher goals that can be further developed to influence the creative output of gifted students.

P.8 Ratchada Yatra. ***IPST's Identification and Promotion of the Science and Mathematics Gifted*** **(Poster.8)** The Institute for the Promotion of Teaching Science and Technology (IPST), under the Ministry of Education, is assigned by the Thai government to conduct a process of identifying, promoting and developing science and mathematics gifted and talented in the K-12 level. For the last 20 years, the IPST has been carrying out two main projects, one in primary level and another in upper-secondary level. In the primary level, the IPST's Science and Mathematics Gifted Project searches for the gifted in science and mathematics by organizing a nation-wide competitive exams, for which about 300,000 students participate annually. About 400 students who attained the highest scores are identified as either science or mathematics gifted and will be publicly recognized and offered enrichment activities. In the upper-secondary level, similar approach is carried out, but with a few more stages and more categories – physics, chemistry, informatics, etc. A group of 4 – 5 students who attain the highest scores in each category will be selected to represent Thailand in the International Mathematics and Science Olympiad team. They will also be offered scholarship to study abroad. Despite all the students' accomplishments, much research are needed to be done in order to make the most of this talented pool of human resource. Some possible research questions are: What are the effects of competitive exams on creativity of the gifted and talented? While in a short-run, the gifted and talented have achieved their academic goals, in the long-run, have they become successful in their adult life?

P.9 Renata Aparecida da Costa; Mendonça Aquino; Eunice Maria Lima; Soriano de Alencar. ***Perceptions of Professors and Students of a Pedagogy Course about Characteristics of Innovative Teaching*** **(Poster.9)** This study investigated the perceptions of professors and students of a pedagogy course regarding the characteristics of innovative teaching. The participants were 31 professors and 73 students of the last two semesters of the pedagogy courses of different Brazilian colleges at the Federal District. The instrument used for data collection included a scale of innovative teaching descriptors and two open questions. The results revealed that the descriptors of innovative teaching with the highest means in the sample of professors were: "the professor is open to new ideas," "connects information to real situations, problems and current issues," and "is interested in connecting with students and fosters dialogue." The highest means in the sample of students were: "the professor connects information to real situations, problems and current issues," "helps students to construct knowledge themselves," and "is open to new ideas." Results also indicated that both professors and students attributed importance to creativity in the pedagogy course. However, according to a telling number of students, their professors did not use teaching methods that support the development of creativity.

P.10 Renata Sayão Araujo Manso; Eunice Maria Lima Soriano de Alencar; Vanessa Terezinha Alves Tentes. ***Conceptions and Myths about Giftedness: What Do Teachers of Young Children Think about This?*** **(Poster.10)** This study investigated teachers` conceptions of giftedness and their beliefs concerning myths related to this construct. The study also analyzed the influence of teaching experience with gifted children in respect to teachers` conceptions of giftedness. Twenty teachers of four to six year old children from the Brazilian educational system in the Federal District were interviewed. Ten teachers had already taught gifted students and 10 had never had this experience before. The interview protocol included open questions about conceptions of giftedness, characteristics of gifted children, and the influence of teaching experience with gifted children on the teacher´s knowledge about giftedness, as well as 21 statements involving different myths related to giftedness to be presented to the teachers. Qualitative analysis of the interview transcripts revealed that development above mean and ability in a specific area were the most frequent aspects in the teachers` conceptions of giftedness. Concerning the myths related to giftedness, results indicated that most teachers did not believe in them. No difference was observed between the two groups of teachers in their conceptions of giftedness. However, teachers who had experience in teaching gifted children, more than those who had not, highlighted the importance of identifying these children in their first years of school. The study showed that, although giftedness is not totally unknown to the teachers, they need more information about the identification process and strategies to attend the gifted children`s academic needs in order for these children to develop their potential more fully.

P.11 Sierszenska Leraczyk Malgorzata. ***Stage Fright and the Participants of the Wieniawski International Violin Competition*** **(Poster.11)** The author of the presentation is both a psychologist and a musician. She is a lecturer at Academy of Music in Poznan, and she has worked in specialist music schools in Poznan as a teacher and a psychologist for 25 years. The poster presented during 3rd International Conference on Music and Emotion includes information about nature of stage fright among all participants during the Competitions in 2006 and 2011 (n=90). The Wieniawski International Violin Competition is preceded by rigorous preliminaries, the very fact of taking part in the Competition can be considered an achievement, which means that we deal with a group of individuals whose high quality of music attainment is unquestionable. The group's quality of music attainment is also confirmed by their previous achievements – most of them were winners of various performance competitions, students of prestigious music academies, and tutees of famous violin teachers.

SUBMISSION

Please send manuscript(s) to the Editor-in-Chief:

Prof. Dr. Taisir Subhi Yamin
General Director, The International Centre for Innovation in Education (ICIE)
Heilmeyersteige 93
D-89075, Ulm; Germany
Phone: (+49) 731.50.94494 • Mobile: (+49) 172.929.7632 • e-Mail: taisir@yahoo.com

HISTORY AT A GLANCE

THE WORLD CONFERENCE

NO.	CITY	YEAR	PRESIDENT OF THE WCGTC
1	London	1975	Dan Bitan
2	San Francisco	1977	Iraj Broomand/ Dorothy Sisk
3	Jerusalem	1979	Henry Collis
4	Montreal	1981	James Gallagher
5	Manila	1983	James Gallagher
6	Hamburg	1985	A. Harry Passow
7	Salt Lake	1987	A. Harry Passow
8	Sydney	1989	Norah Maier
9	La Hague	1991	Norah Maier
10	Toronto	1993	Wu-Tien Wu
11	Hong Kong	1995	Wu-Tien Wu
12	Seattle	1997	Barbara Clark
13	Istanbul	1999	Barbara Clark
14	Barcelona	2001	Klaus Urban
15	Adelaide	2003	Klaus Urban
16	New Orleans	2005	Den-Mo Tsai
17	Warwick	2007	Den-Mo Tsai
18	Vancouver	2009	Taisir Subhi Yamin
19	Prague	2011	Taisir Subhi Yamin
20	Louisville	2013	Leslie S. Graves

CURRENT & FORMER PRESIDENTS:

Taisir Subhi Yamin	(2009-2013)	Wu-Tien Wu	(1993-1997)
Den-Mo Tsai	(2005-2009)	Norah Maier	(1989-1993)
Klaus Urban	(2001-2005)	A. Harry Passow	(1985-1989)
Barbara Clark	(1997-2001)	James Gallagher	(1981-1985)

The World Council was officially incorporated and registered in the state of Delaware as a non-profit organization on March 30, 1976. The officers at the time were President Dan Bitan, Vice-President Henry Collis, Executive Vice-President Alexis DuPont DeBie, joint Secretaries Dorothy Sisk and Elizabeth Neuman, and Treasurer Bob Swain.

Bob Swain, from California, had proposed that San Francisco be considered as the site for the Second World Conference, and it was held there in 1977. Representation in the new seven-member executive expanded to: President Iraj Broomand, Vice-President Dorothy Sisk, and members Marie Schmidt, Levcho Zdravchev, Warren Lett, Henry Collis, and Dan Bitan. In 1978, Vice-President Dorothy Sisk assumed the presidency, according to the World Council constitution, until Henry Collis was elected as President at the Jerusalem conference in 1979. He held the post until 1981.

EXECUTIVE COMMITTEE (2009-2011)

President:	Taisir Subhi Yamin	Member:	Ngarmmars Kasemset
Vice President:	Edna McMillan	Member:	Leonie Kronborg
Secretary:	Leslie S. Graves	Member:	Klaus K. Urban
Treasurer:	Julia Link Roberts		

EXECUTIVE COMMITTEE (2011-2013)

President:	Taisir Subhi Yamin	Member:	Ümit Davaslıgil
Vice President:	Ken McCluskey	Member:	Leonie Kronborg
Secretary:	Klaus K. Urban	Member:	Leslie S. Graves
Treasurer:	Julia Link Roberts		

GIFTED AND TALENTED INTERNATIONAL (GTI)

A major undertaking was discussed at the San Francisco meeting: the creation of a journal. Levcho Zdravchev agreed to edit and publish a journal for the WCGTC, which was entitled *GATE: Gifted and Talented Education*. He published three issues of *GATE*, absorbing the cost of the journal through his Bulgarian office.

In 1979, Dorothy Sisk became the editor of the journal, now to be named *Gifted International*, and she held the post until 1993. During this time, Tom Kemnitz, owner of Trillium Press, published and distributed the journal. In the 1990s, under the editorship of John Feldhusen, the name was changed to *Gifted and Talented International*. Subsequent editors have been Joyce Van Tassel-Baska and Maria McCann. The current editor-in-chief is Taisir Subhi Yamin (2005-up to date).

HEADQUARTERS

In 1983, the Secretariat was transferred from New York to Tampa, at the University of South Florida, with Dorothy Sisk as Executive Secretary. Five years later, it was moved to Lamar University in Beaumont, Texas, with Dorothy Sisk as Executive Administrator. At both of these sites, all World Council expenses were covered by the hosting institutions. In 1993, the Secretariat was moved to Purdue University in West Lafayette, Indiana and administered by the graduate students of John Feldhusen. Partly due to a financial incentive from David Belin, the office was moved to the Belin-Blank Center for Gifted and Talented Development at the University of Iowa in Iowa City in 1995, with Nicholas Colangelo as the Executive Director for two years. Subsequently, the Headquarters was moved to Northridge, California, to the business consulting company of Sheila Madsen and Dennis Stevens. From May 2005, until December 2010, the Headquarters was located at The University of Winnipeg. It was supported by the Faculty of Education. Since January 2011, the Headquarters is located at The Center for Gifted Studies-Western Kentucky University with Tracy C. Harkins as Executive Administrator.

If you have any question, will you please contact the Executive Administrator. Her address reads as follows:

Tracy C. Harkins
Executive Administrator
WKU, 1906 College Heights Blvd. #11030
Gary A. Ransdell Hall, Room 2007
Bowling Green, KY 42101-1030, USA
Phone: 1 (270) 745-4123
Fax: 1 (270) 745-4124
Email: tracy.harkins@wku.edu

WCGTC LIST OF DELEGATES

WCGTC Delegates are the organization's on-the-ground representatives in each participating country. Delegates recruit and communicate with members, promote the World Council and its activities, forge links with other organizations in their country, and report their achievements back to the World Council. They also participate in the Delegates' Assembly at the World Conference. This list reflects the Delegate status as of July 19, 2013 and is subject to change based on current membership status.

Argentina
Maria del Carmen Maggio

Australia
Susan Knopfelmacher, Toni Meath, Margaret Plunkett, Michelle Bannister-Tyrrell (Alternate)

Austria
Mag. Helga Pfeifer, Claudia Resch, Kornelia Tischler, Johanna Stahl (Alternate)

Bahrain
Jihan Alumran

Belgium
Carl D'Hondt, Stijn Smeets

Brazil
Eunice Maria Lima Soriano de Alencar, Maria Lucia Sabatella

Canada
Kevin Lamoureux, Adrienne Saunder

Denmark
Susanne Hoff-Clausen, Ole Kyed, Tina Refning Larsen, Poul Nissen (Alternate)

Ecuador
Fanny Alencastro

England & Wales
Ferial Mansour, Johanna M. Raffan, Roger Silk, Matthew Edinger (Alternate)

Estonia
Viire Sepp

France
Monique Binda, Jean-Christian Brunault, Jean Charles Terrassier (Alternate)

Germany
Christian Fischer, Roya Klingner, Albert Ziegler

Greece
Sofia Theodoridou

Hong Kong
Mantak Yuen, Pui-Tin Chan, Helen Siu Yin Ku-Yu

India
Krishna Maitra

Iran
Marziyeh Aminj

Ireland
Anna Giblin, Joyce Senior

Israel
Hanna David, Hava Vidergor, Shoshana Rosemarin

Jamaica
Vivienne DeOkoro

Japan
Nobutaka Matsumura

Jordan
Janette Wakileh

Korea
Doehee Ahn

Mexico
Andrew Almazan Anaya, Ingrid Dallal Fratz, Zayda Accevo Zepeda, Raquel Bronsoler (Alternate)

The Netherlands
Marieke Schuurman-van der Heyden, Hans van Elten

New Zealand
Rose Blackett, Tracy Riley, Mary St George, Lynda Garrett (Alternate)

Peru
Sheyla Blumen, Manuel E. Rodriguez

Poland
Cezary Gluszek, Malgorzata Sierszenska-Leraczyk

Romania
Ana-Maria Bezem

Saudi Arabia
Alfaisal Al Humaid, Abdullah Al-Jughaiman

Scotland
Niamh Stack, Margaret Sutherland

Singapore
Bee Geok Tan, Liang See Tan

Slovakia
Zuzana Jurkovicova

Slovenia
Mojca Jurievi

Spain
Juan Antonio Alonso, Yolanda Benito, Flavio Castiglione, Leopoldo Carreras (Alternate)

Switzerland
Jean-Jacques Bertschi, Victor Mueller-Oppliger, Marion Rogalla, Salome Mueller-Oppliger (Alternate)

Taiwan
Ching-chih Kuo, Wu-Tien Wu

Thailand
Usanee Anuruthwong, Selena Gallagher

Trinidad & Tobago
Nubia Williams

Turkey
Serap Emir, Nihat Gürel Kahveci, Ayça (Köksal) Konik, Marilena Z. Leana Tacılar (Alternate)

Ukraine
Oleksandr Butov, Maksym Galchenko, Nataliia Polikhun

Uruguay
Karen Bendelman

USA
Wendy Behrens, Joyce Miller, Sylvia Rimm, Connie Phelps (Alternate)

Vietnam
Anh Bui, Minh Kim

AFFILIATED ORGANIZATIONS AND INSTITUTIONS

Organizations which desire to become affiliated with the World Council must be non-profit and have written bylaws (or if no bylaws exist an official statement outlining the organization's purpose, goals, and philosophy) that are in accordance with those of the World Council. Membership exists in one of two categories:

- Affiliated Federations that are organizations of three or more countries and have officers and written bylaws (or if no bylaws exist an official statement outlining the federation's purpose, goals, and philosophy) that govern the federation, or
- Affiliated Organizations that are local, state, regional, or national and have officers and written bylaws (or if no bylaws exist an official statement outlining the organization's purpose, goals, and philosophy) that govern the organization.

Currently, the following federations and organizations are Affiliates of the World Council:

AFFILIATED FEDERATIONS

- The African Federation for the Gifted and Talented (AFGT)
- Asia-Pacific Federation on Giftedness
- ECHA (European Council for High Ability)
- Eurotalent (France)
- Ibero-American Federation

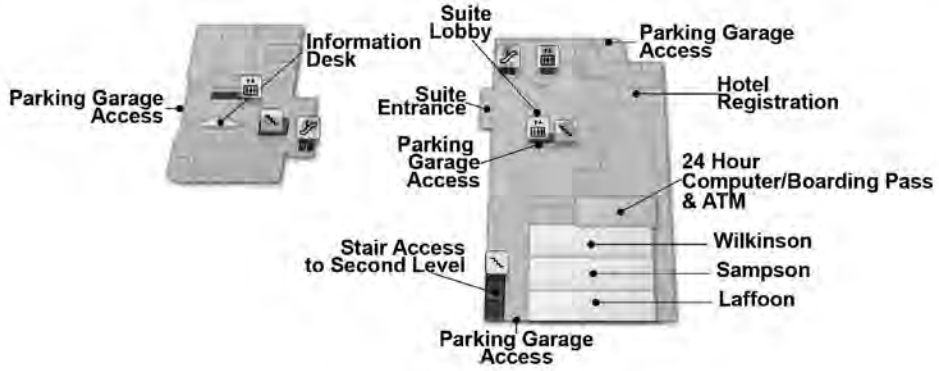
AFFILIATED ORGANIZATIONS

- Al Alfi Foundation, Egypt
- Association of Hungarian Talent Support Organizations
- Association of Talent and Giftedness (STaN – Czech Republic)
- Austrian Research and Support Center for the Gifted and Talented
- The Carol Martin Gatton Academy of Mathematics and Science in Kentucky
- The Center for Gifted Studies at Western Kentucky University
- Centro de Atención al Talento (CEDAT), Mexico
- Dan Voiculescu Foundation for Romania's Development
- Deutsche Gesellschaft für das hochbegabte Kind e.V. (DGhK)
- Foundation of International Education Poland
- Future Problem Solving Program International, Inc.
- Gifted Children Denmark
- The Hong Kong Academy for Gifted Education
- Institute of Gifted Child Ukraine
- IRSCA Gifted Education Association
- Minor Academy of Sciences Ukraine
- National Association for Able Children in Education (NACE-UK)
- National Association for Gifted Children (NAGC-UK)
- National Association for Gifted Children (NAGC-USA)
- Philippine Center for Gifted Education, Inc.
- School Talenta Zurich
- Scottish Network for Able Pupils (SNAP)
- The University of Winnipeg
- The Wisconsin Center for Gifted Learners

GALT HOUSE MAP – 1ST & 2ND FLOOR

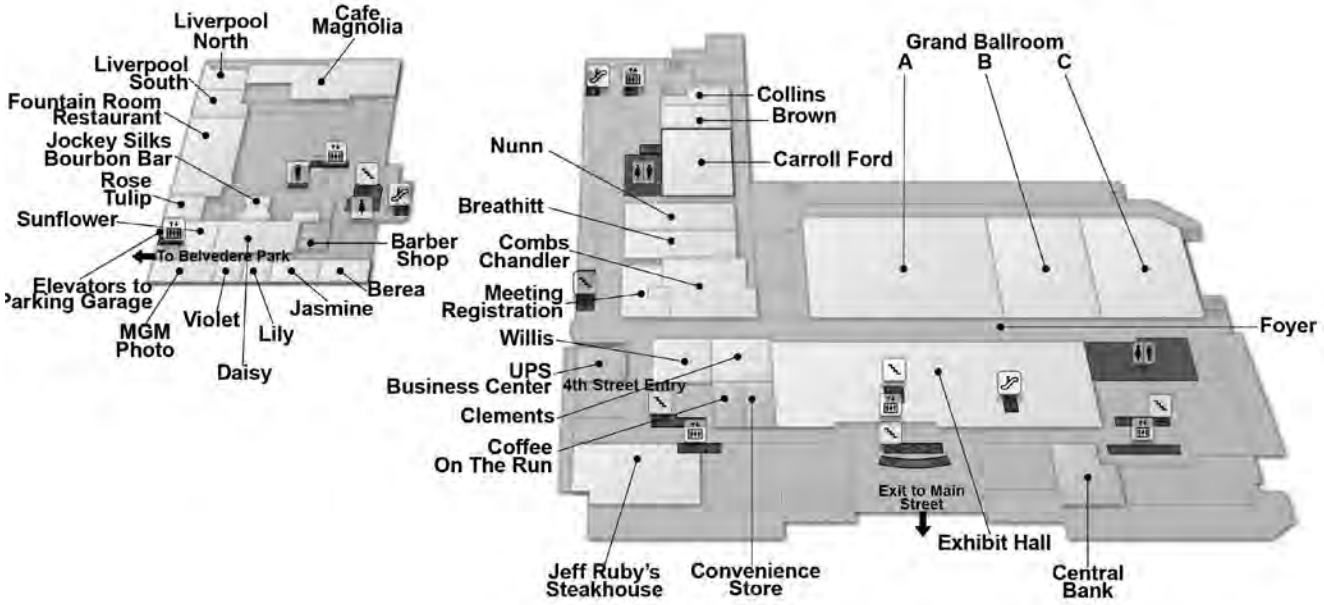
RIVUE 1st FLOOR

1st SUITE FLOOR

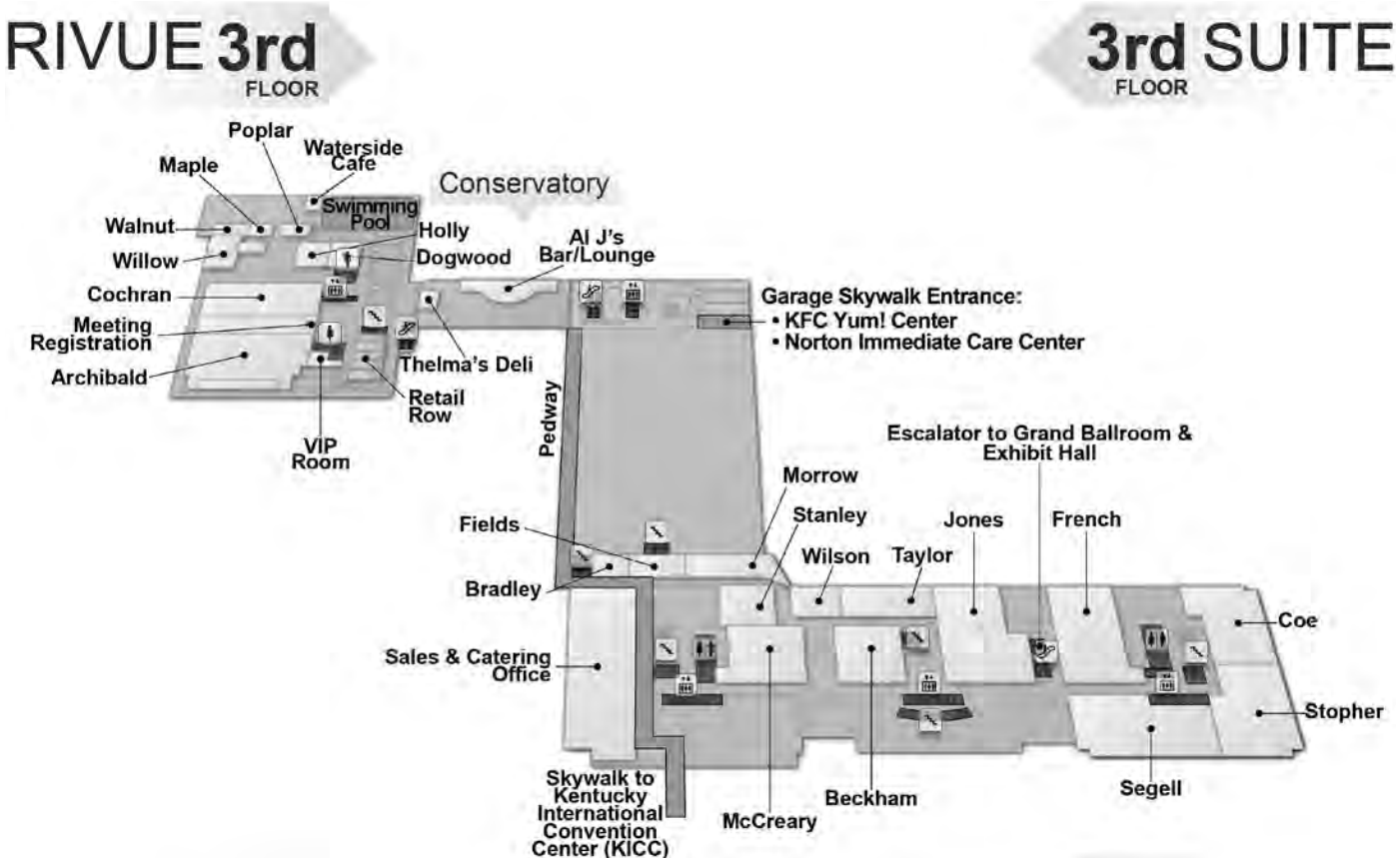


RIVUE 2nd FLOOR

2nd SUITE FLOOR



GALT HOUSE MAP – 3RD FLOOR



VENDORS AND EXHIBITORS

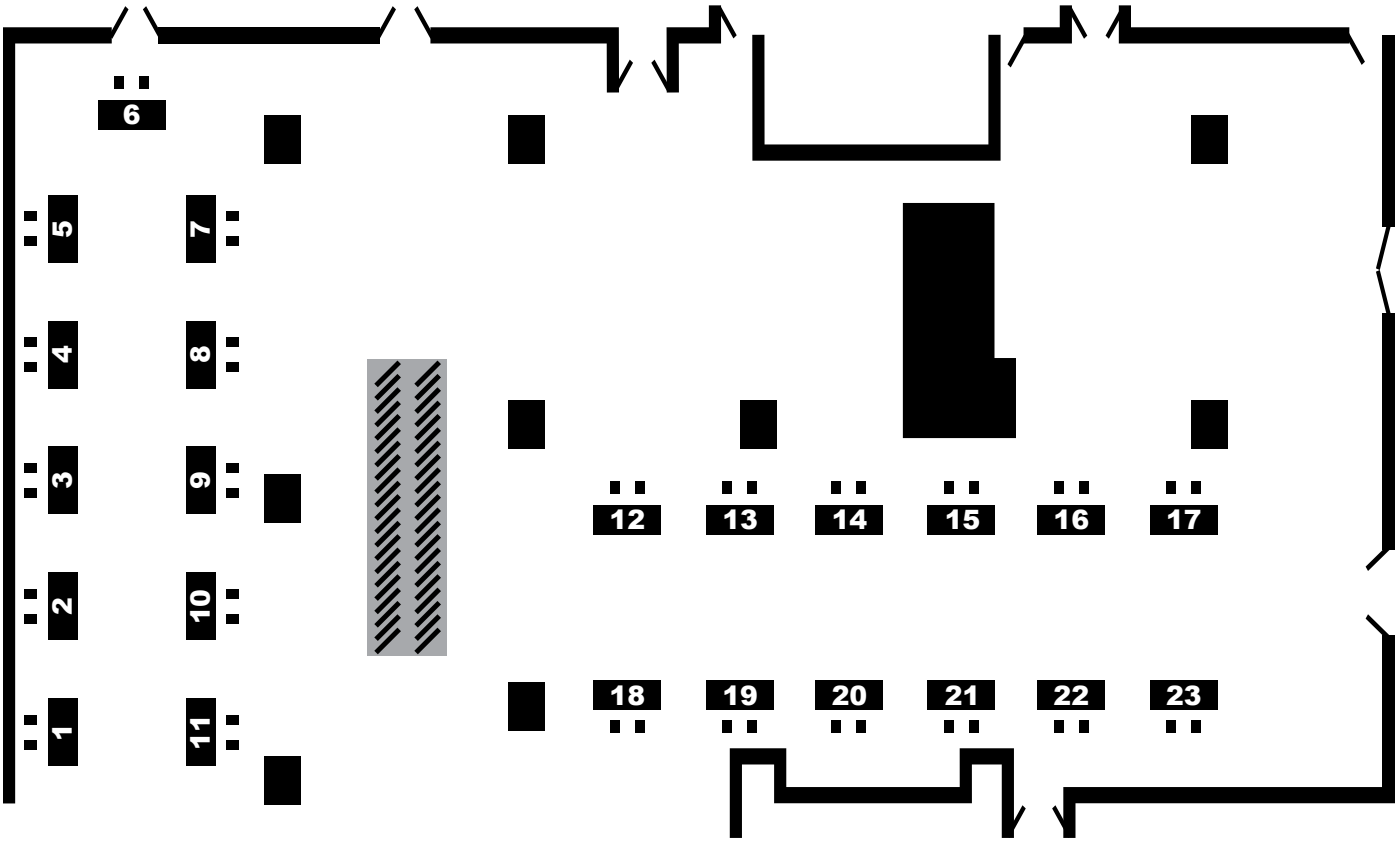


TABLE #	NAME
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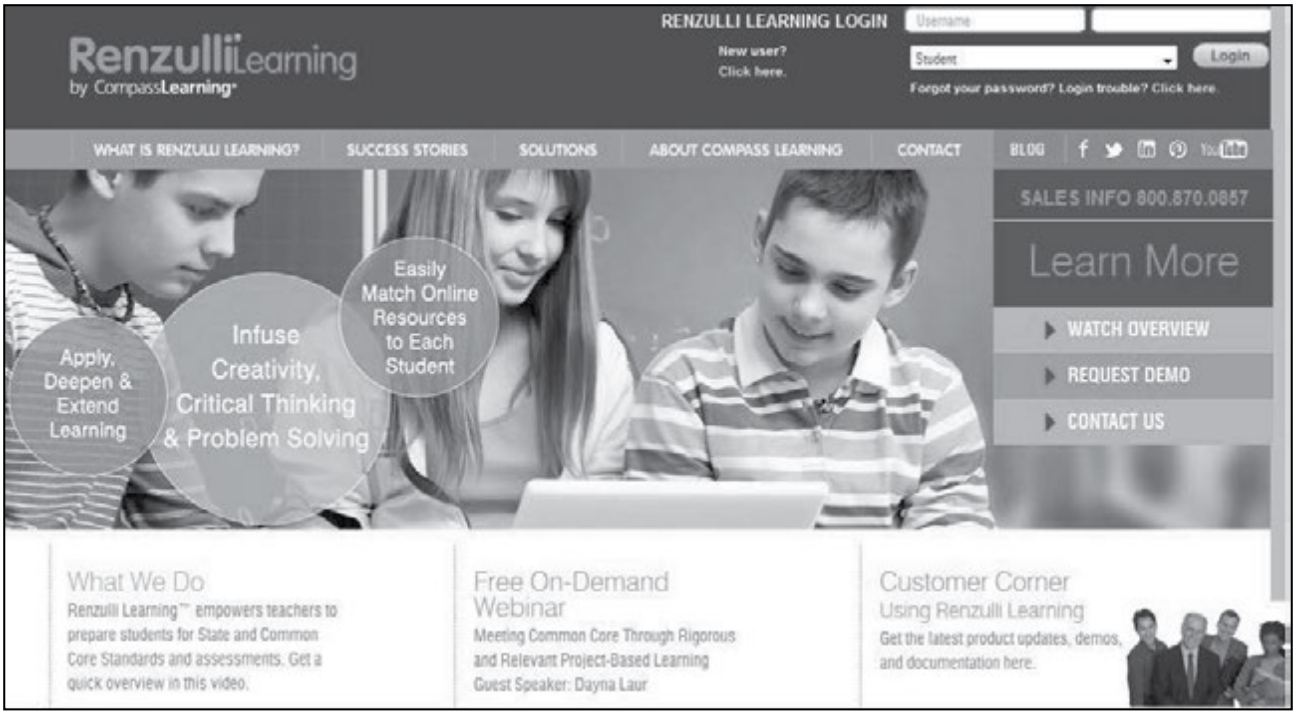
Table 15	Center for Talent Development, Northwestern University
Table 16	Centro de Atención al Talento (CEDAT)
Table 18	CompassLearning Inc.
Table 10	Duke University Talent Identification Program (Duke TIP)
Table 7	Future Problem Solving Program International, Inc.
Foyer table	The Gatton Academy of Mathematics and Science in Kentucky
Table 20	Great Potential Press, Inc.
Table 17	Hands -On Equations, Borenson and Associates, Inc.
Table 21	Institute for the Development of Gifted Education, University of Denver
Table 5	Kendall Hunt Publishing Company
Foyer table	Kentucky Association for Gifted Education (KAGE)
Table 23	Nathan Levy Books LLC
Table 11	National Association for Gifted Children (NAGC)
Table 19	The National Beta Club
Table 22	Odyssey of the Mind
Table 6	Pearson
Table 4	Philippine Center for Gifted Education, Inc.
Table 12, 13	Prufrock Press
Table 8, 9	Royal Fireworks Publishing Co., Inc.
Table 3	Scholastic Testing Service, Inc. (STS)
Table 2	Supporting Emotional Needs of the Gifted (SENG)
Table 1	Usborne Books & More
Table 14	World Conference Denmark 2015
Foyer table	World Council for Gifted and Talented Children (WCGTC)

Renzulli Learning System

www.renzullilearning.com



The Renzulli Learning System is an exciting on-line system (platform) that matches students' abilities, interests and styles of learning and expression to many different opportunities designed to provide enriched, challenging learning. All of the activities and options in the Renzulli Learning System are based on The Enrichment Triad Model, which has been cited as the most widely used plan for enrichment and talent development in the world.

In the Renzulli Learning System, the Renzulli ProfilerTM generates an individual profile for each student. Then an individualized Enrichment Differentiation collection of Internet and downloadable resources are made available that matches student interests, learning styles, and preferred modes of expression.

CompassLearning®
Engage, think & learn.

The RLS is a completely new adaptation of work that is based on almost 40 years of research designed to help students learn more about their own interests and talents. Taking advantage of state of the art technology, The RLS searches out an enormous amount of information on the web to find enriching, challenging differentiated enrichment opportunities for all students in their areas of interest and choice. The RLS is based on research conducted by Dr. Joseph Renzulli and Dr. Sally Reis of the University of Connecticut's Neag School of Education. This research suggests that students achieve at higher levels when they pursue topics and activities of personal interest and that enrichment can be provided to all students through the use of the RLS.

The RLS is based on the following five basic principles of what is commonly recognized as the foundation for enrichment and advanced level learning:

- Each learner is unique, and, therefore, enrichment learning experiences must take into account the abilities, interests, learning styles, and preferred modes of expression of each student;
- Learning is more effective when students enjoy what they are doing, and, therefore, enrichment learning experiences should be created with enjoyment of learning as a major goal;
- Learning is more meaningful and enjoyable when content (i.e., knowledge) and process (i.e., thinking skills, methods of inquiry) are learned within the context of a real and present problem; and, therefore, attention should be given to enrichment opportunities that: (a) personalize student choice in problem selection, (b) create conditions that insure the relevance of the problem for individuals or groups who share a common interest in the problem, and (c) provide resources and strategies for assisting students in pursuing interests in ways that approximate the work of practicing professionals;
- A major goal of the RLS is to enhance knowledge and thinking skill acquisition with opportunities to apply what one is learning in areas of personal interest, relevance, and preferences for creative productivity; and
- The RLS matches students' interests and learning styles to many different learning opportunities that will both challenge them and help them to enjoy learning. All of the activities and options in the RLS are based on The Enrichment Triad Model.

97 ways to use the RLS

- In summary, the RLS could be employed to: Learn about differentiation; have students create graphs of learning styles; create a gallery walk of student profiles; use the Profile as writing prompt; use the Profile in child study meetings. The Renzulli Profiler acts like a blue print for how each student learns. You can use this data to guide decision-making in your teams during child study meetings, IEP development, transition planning and parental conferences. The Profile gives rich information about each student's interests and preferences, and will suggest new avenues for reaching, challenging, and enriching each student.

- In addition, the RLS enables you to: Use the Profile in meetings with principals, counselors; break the ice in mentoring situations; make a seating chart; create bar charts of learning profile information (Manager Site only); open-ended questions; virtual field trips; real field trips; creativity training; critical thinking; projects and independent study; contests and competitions; find interest-based books; find nonfiction books; find how-to books; find summer programs; find online classes; find research sites; keyword differentiation; use the Journal for writing reflections; use the Journal for writing centers; student portfolios; use the differentiation engine to introduce a unit; make an instant KWL; use pre-written assessment questions; create your own differentiated assessment; create tiered assessments using the differentiation engine; use Literature Connections to supplement the teaching of a work of literature; SEM-R Bookmarks; booklists for talented readers; intra-grade-level interest-based clusters; make everything athletic; interest development centers; use the built-in Self-Assessments; create a new assignment with the Assignment Maker; use the Assignment Maker templates; share assignments with colleagues; and create tiered assignments with Assignment Maker.

- The RLS helps teachers and school administrators to manage their students. This implies that RLS enables you to: Group students by shared learning styles; group students by shared interests; group students by shared expression styles; group students with different interests; group students with different expression styles; form collaborative learning groups; group assignments with collaborative learning groups; use collaborative groups as a planning forum for teachers; groups of teachers considering student work, via collaborative groups.

- The RLS provides teachers with a number of useful tools, facilities and functions, including: The use the Wizard Project Maker to find projects that match student interests; to print a project plan; throw a Renzulli Fair; use Unit Supplements to find engaging resources; top-rated activities; deal with bullying; summer assignments in reading and math; find lesson plans; get ideas from the RLS "Success Stories"; curriculum Compacting; and tailor whole-group instruction to the class's preferences.

- The RLS offers teachers the opportunity to develop and employ the Personal Success Plan (PSP) to: Explore student interests; to identify and research role models; to find helpers and mentors; to explore and learn more about careers; to create long- and short-term academic and personal goals; to help students make plans to achieve their goals; to teach language arts, math, science, social studies, foreign languages, physical education, music, and art. In addition, you could employ the PSP for career day projects.

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JULIA LINK ROBERTS
Mahurin Professor of Gifted Studies
Executive Director, The Center for Gifted Studies and The Carol Martin Gatton Academy of Mathematics and Science

Western Kentucky University
1906 College Heights Boulevard #71031
Bowling Green, KY 42101-1031

Phone: 270-745-6323
Fax: 270-745-6279
Email: julia.roberts@wku.edu
Web: www.wku.edu/gifted