# **Embracing Diversity Blooming Talents**

# Program Book

Edited by Ching-Chih Kuo, Hsiao-Ping Yu, Wei-Ren Chen, Yen-Wei Chen Published 2022 by National Taiwan Normal University

The 17th Asia-Pacific Conference on Giftedness

# 7-10 July 2022, Taipei

Sponsor: K-12 Education Administration, Ministry of Education, ROC (Taiwan)

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# Welcome Messages

# Opening Address from the Political Deputy Minister of MOE

President of APFG, Dr. Usanee Anuruthwong, President Wu of National Taiwan Normal University, Prof. Ching-Chih Kuo, distinguished guests and participants both online and onsite, Good morning! Welcome to "the 17<sup>th</sup> Asia-Pacific Conference on Giftedness" held in Taiwan. On behalf of Ministry of Education of the Republic of China, I would like to extend my sincere welcome to you all.



The Asia-Pacific Conference of Giftedness is a biennial international conference held by Asia-Pacific countries to explore the current issues and future development of gifted education in the Asia-Pacific region. Taiwan held the 2<sup>nd</sup> and 9<sup>th</sup> APCG Conference in 1992 and 2006. We feel most honored to hold this conference a third time this year. Due to the pandemic, this year we hold the conference in a blended way, onsite and synchronous online, with nearly one thousand experts, teachers and practitioners in special education from 40 countries and regions participating. You are most welcome and your participation is very much appreciated.

Talents are national capitals and the foundation of a nation. Nurturing talents is a key to sustainable development and international competitiveness of a country. Taiwan has placed great emphasis on gifted education in secondary and elementary education. We have stipulated "Medium-term Project of Quality Development of Gifted Education" to identify gifted talents, provide them with multiple and diverse learning opportunities to develop their abilities of independent study, stimulate their creativity and potentials to lead, enhance their awareness and care for international communities and become talents with competitiveness of our country.

Starting from today, the 17<sup>th</sup> APCG Conference are being held here in Taipei for four days. It contains diverse events and activities, including 11 keynote speeches, 3 invited symposia, 1 invited workshop, 102 oral presentations and

70 poster presentations. Special thanks go to Prof. Ching-Chih Kou and her excellent team for organizing this conference. I also want to thank all the participants from different countries for your enthusiasm and participation, all the speakers and moderators for your contributions to this conference. I hope this conference will give you a fulfilling experience.

When the pandemic subsides, you are most welcome to visit Taiwan and experience our hospitality and delicacies firsthand. Finally, I wish every one of you good health and everything goes well with you, the 17<sup>th</sup> APCG Conference a great success. Thank you!

#### Dr. Ching-Hua Tsai

Political Deputy Minister, Ministry of Education

# Opening Remarks from the President of NTNU

With great pleasure, I would like to welcome all of you to the 17<sup>th</sup> Asia-Pacific Conference on Giftedness and 2022 International Inclusive Education. We feel deeply honored and privileged to host this conference both onsite at National Taiwan Normal University (NTNU) and online.

Holding this conference is of great significance in two ways. First, this is the third time that NTNU has hosted



the Asia-Pacific Conference on Giftedness; second, it is the first time that this conference is held in a hybrid form. 2022 is a special year for NTNU as it marks the 100<sup>th</sup> anniversary of this prestigious university with a long history. Composed of nine colleges, NTNU is a comprehensive university that attaches equal importance to teaching and research. We take special pride in the contributions that we are making to special education in Taiwan. We pledge to invest more effort into this field in the years to come, with an aim to exert our influence and extend our contribution to the international community.

The theme of the 2022 APCG Biennial Conference is "Embrace Diversity, Blooming Talents", with the two areas of special education-gifted education and disability education—included as its core spirit. It is hoped that more people with special needs will be able to realize their fullest potential and showcase their talents. The conference will include keynote speeches, invited symposia, presentations and poster presentations, bringing researchers. oral policymakers, and practitioners together to share and exchange ideas. We are very optimistic that this conference will render a very rewarding experience and provide new insights into future research and pedagogical practice in gifted education, talent development, and excellence pursuit. We thank all the speakers and presenters for generously sharing your valuable expertise and experiences.

Additionally, I would like to take this opportunity to thank the Ministry of Education and the Ministry of Science and Technology for their support in making this event happen. I would also like to extend my appreciation to the Department of Special Education for their hard work and high standards of professionalism to make this conference a reality during the uncertain and difficult times of the pandemic. My heartfelt thanks also go to the College of Education, the Special Education Center, and the Chinese Association of Gifted Education for co-organizing this conference.

July is one of the sunniest months in Taiwan, a wonderful time to relish her beauty and richness. We hope our distinguished guests, President Usanee and Dr. Apichart, will enjoy the rich cultures, delicious foods, and beautiful scenery in Taiwan. We also hope that virtual attendees can arrange a visit to this beautiful subtropical island and enjoy our warm hospitality someday in the near future!

Finally, I wish the conference a great success and may all of you have a wonderful time at the conference. Most importantly, stay safe, stay healthy, and be happy every day!

#### Prof. Dr. Cheng-Chih Wu

President, National Taiwan Normal University

# Congratulatory Address from the General Director of K-12EA, MOE

On behalf of the K-12 Education Administration, Ministry of Education (MOE), I would like to welcome all of you to the 17<sup>th</sup> Asia-Pacific Conference on Giftedness. With great honor, we are thrilled to organize this exciting and meaningful event for a third time. This year, we gather gifted and talented keynote speakers and presenters from different countries and regions to share and exchange academic and cultural



perspectives on the leading theme "Embracing Diversity, Blooming Talents." Taiwan has provided a quality learning environment to nurture our future talents. We believe that happiness, excellence, aspiration, reliance, teamwork, and action (HEART-A) are the core values of a well-developed education environment for all students. Besides, we value an adaptive education for nurturing students who require differentiated programs to meet their unique learning needs. Our goal is for all the students to do their best and develop their talents to the fullest. Moreover, we expect our gifted community to take action to help students from diverse backgrounds attain equal opportunities and receive quality education.

During the 4-day conference, I hope that the topics and issues addressed in the conference will inspire your future efforts and give you the tools necessary to translate them into practice. My heartfelt thanks go to President Cheng-Chih Wu of National Taiwan Normal University (NTNU) and Professor Ching-Chih Kuo for making the conference a reality.

Finally, I would also like to express my great appreciation to you for your contribution and participation. I wish everyone, either online or onsite, a fruitful experience and those who are away from home a safe journey home! May all of you enjoy good health and happiness!

#### Dr. Fu-Yuan Peng

General Director, K-12 Education Administration, Ministry of Education

# Welcome Remarks from

### the President of APFG

On behalf of the Asia-Pacific Federation on Giftedness, I am pleased to welcome all of you to the 17<sup>th</sup> Asia-Pacific Conference in Taipei, Taiwan.

For the past two years, we have all had to face new challenges posed by the pandemic. Our countries have had to close the borders that usually allow us to connect easily with each other. It has been a difficult time for everyone, including the students in our



schools and universities. We have all had to work under severe limitations, and to learn many new coping strategies. It is fortunate that information and communication technology (ICT) has provided valuable access for us to keep in touch with colleagues and for students to continuing studies online.

In a time when the pandemic is yet to subside, an on-site gathering like what we have now is ever so precious. We are all grateful for the efforts of the conference organizer that has allowed us to reunite this year. I would like to express my deepest appreciation to Taiwan's organizing committee that has made this conference possible. Thank you to those organizations and individuals who have offered support. Thank you to all the keynote speakers, session presenters, and exhibitors.

We hope that the topics and issues addressed in the conference will stimulate your thoughts and creativity, and inspire your future work in fostering gifts and talents worldwide. I also hope that you will all embrace the opportunity to engage with like-minded professionals, share your ideas with each other and make this conference a great success.

I wish you an enjoyable and beneficial time in Taipei.

#### Dr. Usanee Anuruthwong

President, Asia-Pacific Federation on Giftedness

# Appreciation from the Chair of Organizing Committee of the 2022 APCG Biennial Conference

With great pleasure, I would like to give my heartfelt thanks to all of you for attending the 2022 Asia-Pacific Conference on Giftedness. As the Chairperson of the Organizing Committee, I would also like to extend my great appreciation to the K-12 Education Administration, Ministry of Education and National Taiwan Normal University for their full support to this international



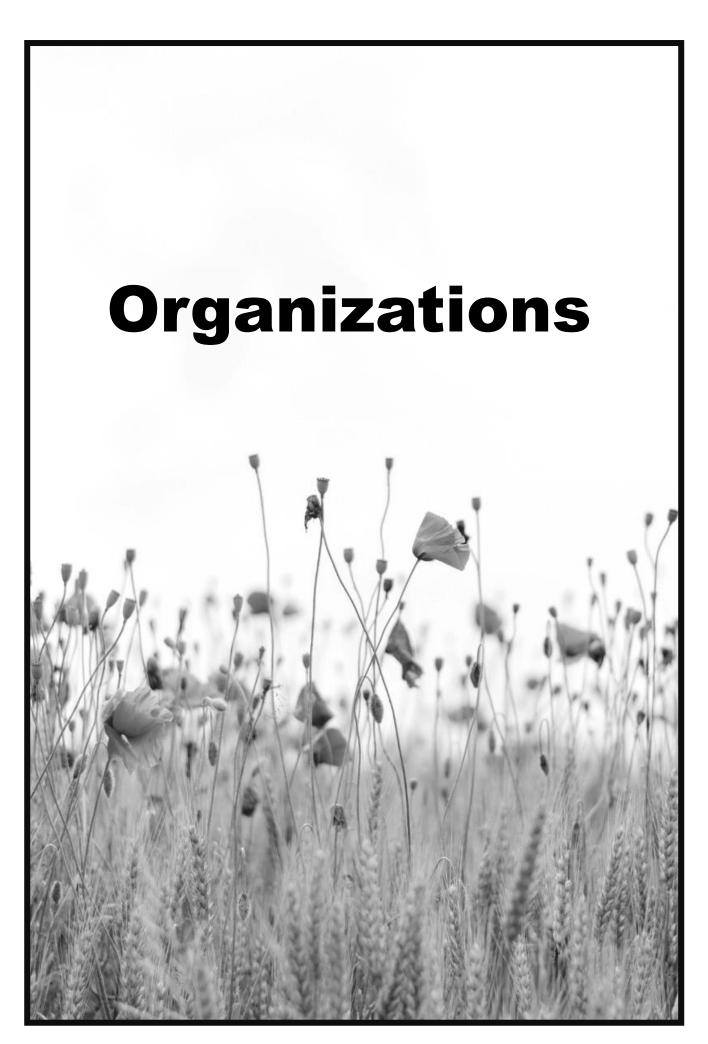
conference during this very hard time of Covid-19 pandemic. My sincere appreciation also goes to President of the Asia-Pacific Federation on Giftedness (APFG), Dr. Usanee Anuruthwong for authorizing Taiwan to host this conference. Through the sharing and discussion of professional knowledge and experience, I believe we all will gain rewarding experiences and new insights into global trends in cultivating talents and encouraging talent development, which is the core of gifted and talented education.

During this four-day conference, 822 participants from 41 countries and regions will be joining us. They are from Armenia, Australia, Austria, Bahrain, Brazil, Canada, China, Croatia, Denmark, Germany, Hong Kong, Hungary, India, Indonesia, Iran, Ireland, Israel, Japan, Macao, Malaysia, Mexico, the Netherlands, New Zealand, Niger, Norway, the Philippines, Romania, the Russia Federation, Saudi Arabia, Singapore, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, Ukraine, the United Arab Emirates, the United Kingdom and the United States. We will have 11 keynote speeches, 3 symposium sessions, 1 workshop session, 100 oral presentations and 34 poster presentations that are contributed by you all.

Words cannot express my appreciation for all the speakers and presenters for your excellent contribution and inspiration. My special appreciation also goes to people who kindly submitted short papers, which have been collected and included in the Program Book and Proceedings. Your presence, together with your expertise, experience, and knowledge certainly will help make this event an intellectually stimulating and memorable one. Again, Taiwan is most honored to host this conference. Thank you all for your participation. I hope you enjoy the conference to the fullest.

#### Prof. Dr. Ching-Chih Kuo

Chair, Organizing Committee, 2022 Asia-Pacific Conference on Giftedness



#### Under the Auspices of

Ministry of Education, Republic of China (Taiwan)

#### Hosted by

K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)

#### Organized by

Department of Special Education, National Taiwan Normal University

#### Co-organized by

Asia-Pacific Federation on Giftedness Special Education Center, National Taiwan Normal University Chinese Association of Gifted Education College of Education, National Taiwan Normal University

#### Sponsored by

K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)

#### Performers

Emily Tsai, Piano Solo Gavin Chen, Piano and Violin Solo

#### Artists

Chi-Sheng Lin, HSIAO-SHENG's Personal Studio Hua-Hsuan Chung, CookBaron Leland Lee, Cafe Astoria

# **Conference Chairs**

Ching-Hua Tsai	Political Deputy Minister, Ministry of Education,
	Republic of China (Taiwan)
Cheng-Chih Wu	President, National Taiwan Normal University
Fu-Yuan Peng	Director-General, K-12 Education Administration,
	Ministry of Education, Republic of China (Taiwan)

# **Advisory Committee**

Wen-Chung Pan	Minister, Ministry of Education, Republic of China
	(Taiwan)
Usanee Anuruthwong	President, Asia-Pacific Federation on Giftedness
	(APFG)
Yao-Ting Sung	Executive Vice-President, National Taiwan Normal
	University
Wu-Tien Wu	Emeritus Professor, Department of Special
	Education, National Taiwan Normal University

# **Organizing Committee Chairs**

Li-Chuan Hsu Deputy Director-General, K-12 Education Administration, Ministry of Education, Republic of China (Taiwan) Ching-Chih Kuo Professor, National Taiwan Normal University & Vice-President, Asia-Pacific Federation on Giftedness

# **Organizing Committee**

Chih-Ming Tsai	Division Chief, Division of Special Education for Indigenous People, K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)
Cin-Jhu Lin	Deputy Director, Division of Special Education for Indigenous People, K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)
Hsun-Ming Wang	Section Chief, Section of Special Education, Division of Special Education for Indigenous People, K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)
I-Tsun Chiang	Professor and Chairperson, Department of Special Education, National Taiwan Normal University
Hsin-Tzu Hu	Director, Special Education Center, National Taiwan Normal University
Hsiao-Ping Yu	Professor, Department of Special Education, National Taiwan Normal University
Shun-Wen Wu	Associate Professor, Department of Music, National Taiwan Normal University
Christine Chifen Tseng	Associate Professor, Department of Applied English, National Taichung University of Science and Technology

# **Scientific Committee**

#### Ching-Chih Kuo

- Vice-President, APFG
- Professor, National Taiwan Normal University, Taiwan

#### Hsiao-Ping Yu

- President, Chinese Association of Gifted Education
- Professor, National Taiwan Normal University, Taiwan

#### Wei-Ren Chen

• Assistant Professor, National Taiwan Normal University, Taiwan

#### Yen-Wei Chen

• Assistant Professor, Chung Yuan Christian University

#### Kyungbin Park

- Immediate Past President, APFG
- Professor, Gachon University, Republic of Korea

#### Quek Chwee Geok

- Secretary, APFG
- Principal Specialist, Ministry of Education, Singapore

#### Uğur Sak

- Treasurer, APFG
- Professor, Anadolu University, Turkey

#### Mantak Yuen

- Executive Committee Member, APFG
- Associate Professor, The University of Hong Kong, Hong Kong, China

#### Jae Yup Jared Jung

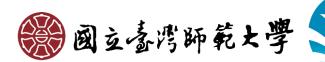
- Executive Committee Member, APFG
- Associate Professor, The University of New South Wales, Australia

Christine Chifen Tseng

• Associate Professor, National Taichung University of Science and Technology, Taiwan







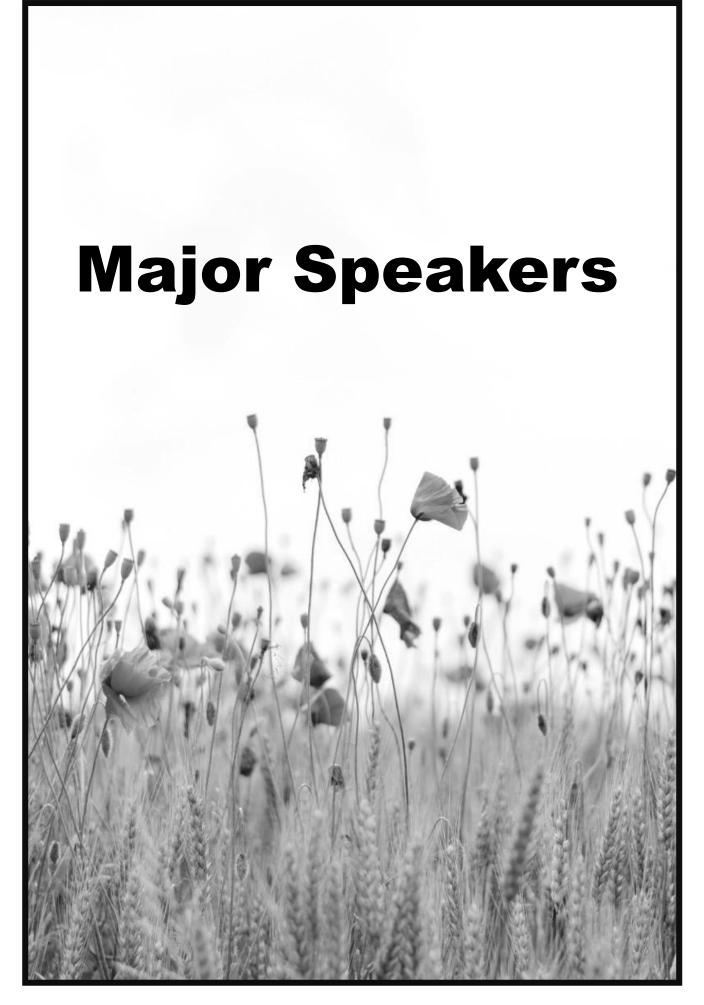














# Professor Del Siegle

University of Connecticut, USA

#### **KEYNOTE 1 TOPIC** Addressing the Elephant in the Room with a Three-Legged Gifted Education Service Approach

#### DATE

Thursday 7<sup>th</sup> July 2022 Time: 09:20–10:30

Del Siegle is the Lynn and Ray Neag Endowed Chair for Talent Development at the University of Connecticut, where he directs the U. S. National Center for Research on Gifted Education (NCRGE). He is a past-president of the National Association for Gifted Children (NAGC) and recipient of their 2021 Founder's Memorial, 2018 Distinguished Scholar, and 2011 Distinguished Service Award. He is a former co-editor of Gifted Child Quarterly (GCQ) and the Journal of Advanced Academics (JOAA), co-author with Gary Davis and Sylvia Rimm of the 6th and 7th editions of Education of the Gifted and Talented, author of The Underachieving Gifted Child: Recognizing, Understanding, & Reversing Underachievement, and author of a technology column for Gifted Child Today. He has served as an Educational Psychology department head and Neag School of Education Associate Dean for Research and Faculty Affairs at the University of Connecticut. He currently chairs the University Senate Executive Committee.



## Assistant Professor Lisa Sigafoos

University of Texas at Austin, USA

#### **KEYNOTE 2 TOPIC** Empowering Disability Identity and Fostering Inclusivity in Postsecondary Classrooms

#### DATE

Thursday 7<sup>th</sup> July 2022 Time: 10:50–12:00

Dr. Lisa Sigafoos is an assistant professor of practice in the Department of Special Education at the University of Texas at Austin. Dr. Sigafoos teaches undergraduate courses related to special education/inclusive education and disabilities including courses such as Individual Differences and Autism Spectrum Disorders. Within her courses, she educates students on disability empowerment, disability language and treatment, and inclusive teaching practices. She is also the coordinator of the undergraduate special education program.

Dr. Sigafoos earned all her degrees from the University of Texas at Austin (UT), starting with a bachelor's in education, a master's in special education- high incidence disabilities, and a doctoral degree in special education with a focus on postsecondary students with disabilities. She also earned a doctorate portfolio in disability studies with a focus on adults with disabilities and inclusive higher education. Dr. Sigafoos serves as the faculty advisor for the UT chapter of Best Buddies and partners with UT's certification program for adults with intellectual and developmental disabilities (IDD), as an inclusive teaching instructor. She also teaches classes aimed at adults with IDD through a UT-sponsored inclusion program. Additionally, Dr. Sigafoos serves on the Austin Resource Board for Special Olympics of Texas.



## Professor Robert J. Sternberg

Cornell University, USA

#### KEYNOTE 3 TOPIC

Transformational Giftedness, and Why Our Conventional Definition of Giftedness Has Become a Disservice to Humanity

#### DATE

Thursday 7th July 2022 Time:15:20-16:50

Robert J. Sternberg is Professor of Psychology in the College of Human Ecology at Cornell University and Honorary Professor of Psychology at Heidelberg University, Germany. Previously, Sternberg served 8 <sup>1</sup>/<sub>2</sub> years in academic administration as a university dean, senior vice-president, and president. Before that, he was IBM Professor of Psychology and Education and Professor of Management at Yale and Director of the Yale Center for the Psychology of Abilities, Competencies, and Expertise.

Sternberg is a Past President of the American Psychological Association, the Federation of Associations in Behavioral and Brain Sciences, the Eastern Psychological Association, and the International Association for Cognitive Education and Psychology. Sternberg also has been president of four divisions of the American Psychological Association and Treasurer of the Association of American Colleges and Universities.

Sternberg's BA is from Yale University summa cum laude, Phi Beta Kappa, his PhD is from Stanford University, and he holds 13 honorary doctorates. Sternberg has won more than two dozen awards for his work, including the James McKeen Cattell Award (1999) and the William James Fellow Award (2017) from APS. He has won the E. Paul Torrance Award from the National Association for Gifted Children, 2006, and the Distinguished Scholar Award, also from the National Association for Gifted Children, 1985. He also is the winner of the Grawemeyer Award in Psychology (2018). He is the author of over 1800 publications.

He was cited in an APA Monitor on Psychology report as one of the top 100 psychologists of the 20th century and in a report in Archives of Scientific Psychology by Diener and colleagues as one of the top 200 psychologists of the modern era. He was cited by Griggs and Christopher in Teaching of Psychology as one of the top-cited scholars in introductorypsychology textbooks. According to Google Scholar, he has been cited over 213,000 times; he has an h index of 223. He has authored textbooks in introductory psychology, cognitive psychology, and in communication in psychology. Sternberg is a member of the US National Academy of Education and the American Academy of Arts and Sciences. He is a Fellow of the American Association for the Advancement of Science.



## Professor Jonathan A. Plucker

John Hopkins University, USA

#### **KEYNOTE 4 TOPIC** Excellence Gaps 12 Years Later: What We Know About Causes and Solutions

#### DATE

Friday 8<sup>th</sup> July 2022 Time: 09:20–10:30

Prof. Jonathan Plucker is the Julian C. Stanley Endowed Professor of Talent Development at Johns Hopkins University. Previously, he was Raymond Neag EndowedProfessor of Education at the University of Connecticut and Professor of Educational Psychology and Cognitive Science at Indiana University, where he was the founding director of the Center for Evaluation and Education Policy.

He graduated with a B.S. in chemistry education and M.A. in educational psychology from the University of Connecticut, then after briefly teaching at an elementary school in New York, received his Ph.D. in educational psychology from the University of Virginia. His research examines education policy and talent development, with over 300 publications to his credit and over \$40 million in external funding to support his work. His recent books include Excellence Gaps in Education with Scott Peters (Harvard Ed Press) and Creativity and Innovation (Prufrock Press), both of which have received the National Association for Gifted Children Book Award.

He is an APA, APS, AERA, and AAAS Fellow and recipient of the 2012 Arnheim Award for Outstanding Achievement in the Psychology of Creativity from APA and 2013 Distinguished Scholar Award from the National Association for Gifted Children. He is a past-president of the Society for the Psychology of Aesthetics, Creativity, and the Arts and immediate pastpresident of the National Association for Gifted Children.



## Assistant Professor Apichart Pholprasert

Chulalongkorn University, Thailand

#### **KEYNOTE 5 TOPIC** Advancing Creativity in Visual Arts Talents

#### DATE

Friday 8<sup>th</sup> July 2022 Time: 10:50-12:00

Currently Head of the Department of Art, Music, and Dance Education, Faculty of Education, Chulalongkorn University, Thailand, Dr. Apichart Pholprasert has been teaching art theories, practice, and research at the Division of Art Education since 2007. Having obtained a Bachelor's Degree in Art Education at Chulalongkorn University, a Master's Degree in Visual Arts at the University of South Australia, and a Practice-led Ph.D. in Fine Arts at the University of Northumbria at Newcastle, UK., Dr. Apichart Pholprasert continues to be a practicing artist, specialised in painting, digital media, and community art. He actively exhibits his art works in Thailand and abroad. In addition to his teaching at the university, he regularly facilitates workshops and lectures for art teacher development and for children with artistic talent programs throughout Thailand. His major contribution to gifted and talented education in Thailand was when he designed and directed a pioneering art camp for talented students in visual arts at Princess Sirindhorn Art Center in 2008, funded by the Institute for Gifted and Innovative Learning (IGIL), Office of the Prime minister. This art camp project later became a model for The Office of the Basic Education Commission, the Ministry of Education Thailand to inaugurate the Center for Developing Students with Special Talents in Visual Art at Princess Siridhorn Art Center in 2014, and Dr. Apichart Pholprasert was appointed as an Executive Committee and a Project Director. He is also Head of Competencies Enhancement Program for Students with Achievements in National and International Level in the Division of Art Education, Chulalongkorn University. This program allows him to continually develop students' creative talent from elementary, secondary, tertiary, and finally to professional level.



### **Professor Margaret Sutherland**

University of Glasgow, UK

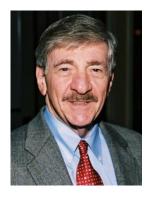
#### **KEYNOTE 6 TOPIC** The Policy Practice Nexus: Bridging the Gap Between Rhetoric and Reality

#### DATE

Friday 8<sup>th</sup> July 2022 Time: 15:20–16:30

Margaret Sutherland, PhD is Professor or High Ability Studies and Inclusive Practice. She is Director of Partnerships, Communication and External Engagement and Director of the Scottish Network for Able Pupils at the University of Glasgow, Scotland, UK. She is a Fellow of the Royal Society of Arts. She serves as Treasurer on the Executive Committee of the World Council for Gifted and Talented Children and the ECHA Accreditation Committee for the European Talent Support Network. She has written articles in the field of high ability and is the author of Gifted and Talented in the Early Years: A Practical Guide for 3-6 year olds and Developing the Gifted and Talented Young Learner.

Her first book is now in its second edition and has been translated into German and Slovenian. She has 40 years teaching experience in mainstream primary schools, behavior support and latterly in higher education and so her work is primarily concerned with learning, teaching and pedagogy. Margaret is on the editorial board of the Korean Educational Development Institute Journal of Educational Policy, Journal for the Education of the Gifted, Journal for Educating Young Scientists and Giftedness and the editorial advisory board for the Journal of Research in Special Educational Needs, British Journal of Research in Special Educational Needs and Support for Learning. She reviews papers for High Ability Studies, European Journal of Teacher Education, Adult and Continuing Education, British Educational Research Journal, the British Journal of Religious Education. She regularly gives keynote addresses at conferences and has led courses, workshops and seminars across the UK and has been invited to work with staff and students in Africa, Europe, Australasia, China and North America.



# Professor Joseph Renzulli

University of Connecticut, USA

#### KEYNOTE 7 TOPIC

Assessment for Learning: The Missing Element for Identifying High Potential in Low Income and Minority Groups

#### DATE

Saturday 9<sup>th</sup> July 2022 Time: 09:20-10:30

Prof. Joseph S. Renzulli is a leader and pioneer in gifted education and applying the pedagogy of gifted education teaching strategies to all students. The American Psychological Association named him among the 25 most influential psychologists in the world. He received the Harold W. McGraw, Jr. Award for Innovation in Education, considered by many to be "the Nobel" for educators, and was a consultant to the White House Task Force on Education of the Gifted and Talented. His work on the Three Ring Conception of Giftedness, the Enrichment Triad Model and curriculum compacting and differentiation were pioneering efforts in the 1970s, and he has contributed hundreds of books, book chapters, articles, and monographs to the professional literature, many of which have been translated to other languages. Prof. has received more than \$50 million in research grants and several million dollars of additional funding for professional development and service projects.

Prof. Renzulli established UConn's annual Confratute Program with fellow Educational Psychology Professor Sally Reis. This summer institute on enrichment-based differentiated teaching has served more than 35,000 teachers from around the world since 1978. Dr. Renzulli also established the UConn Mentor Connection, a summer program that enables high-potential high school students to work side by side with leading scientists, historians, and artists and other leading edge university researchers. He is also the founder along with Dr. Reis of the Joseph S. Renzulli Gifted and Talented Academy in Hartford, Connecticut which has become a model for local and national urban school reform for high potential/low income students.

His most recent work is an online personalized learning program that provides profiles of each student's academic strengths, interests, learning styles, and preferred modes of expression. This unique program also has a search engine that matches multiply coded resources with student profiles. Teachers also use the program to select and infuse high engagement enrichment activities into any and all standardized curriculum topics.



# Professor Uğur Sak

Anadolu University, Turkey

#### KEYNOTE 8 TOPIC THE FUZZY THEORY Implications for the Identification and Education of G&T Students

#### DATE

Saturday 9<sup>th</sup> July 2022 Time: 13:30–14:40

Ugur Sak is a professor of special and talented education at Anadolu University. He founded and worked as the director of the Center for Research and Practice for High Ability Education and founded the graduate programs in gifted education at Anadolu University. He is currently the editor-in-chief of Gifted Education International and the founding editor of the Turkish Journal of Giftedness and Education. His scientific research has focused on developing original models on the identification and education of gifted students, assessment of creativity and intelligence. He developed the first national intelligence scale, Anadolu Sak Intelligence Scale (ASIS), in Turkey and is the author of Selective Problem Solving Model (SPS), Creative Reversal Act (CREACT), and the co-author of Creative Scientific Ability Test (C-SAT) and the Test of Scientific Creativity Animations for Children (TOSCAC). His most recent work is the Fuzzy Theory of Giftedness. He is the recipient of the best academician award of the year-2016 in education selected by Artı Education in Turkey. He was the principal investigator of a nationwide project in Turkey supported by the Ministry of Education to develop the first national K12 curriculum for the education of talented students. He serves on the advisory boards of several journals in gifted education. He has been an active participant in social networks in gifted education, being an executive board member of the Asia-Pacific Federation on Giftedness and a member of the qualification committee of the European Talent Support Network.



# Professor Albert Ziegler

University of Erlangen-Nuremberg, Germany

**KEYNOTE 9 TOPIC** Environmental Boosters of Talent Development

#### DATE

Saturday 9<sup>th</sup> July 2022 Time: 15:00–16:10

Albert Ziegler, PhD, is Chair Professor of Educational Psychology and Research on Excellence at the University of Erlangen-Nuremberg, Germany. He is the Founding Director of the Statewide Counseling and Research Center for the Gifted. He has published approximately 450 books, chapters and articles in the fields of talent development and educational psychology. He developed the Actiotope Model of Giftedness, which promotes a systemic conception of giftedness. In his research, his main interests are learning resources and effective learning environments, self-regulated learning, mentoring, and gifted identification. Presently, he serves as the Secretary General of the International Research Association for Talent Development and Excellence (IRATDE), as Vice-President of the European Council for High Ability (ECHA). He is the Founding Chairman of the European Talent Support Network (ETSN) and was in 2017 appointed Director at the World Giftedness Center in Dubai.



### Professor Dennis Hong

University of California, Los Angeles, USA

KEYNOTE 10
TOPIC
Seeing Things Differently, Connecting Things Unusually

#### DATE

Sunday 10<sup>th</sup> July 2022 Time: 09:20–10:30

Dr. Dennis Hong, a TED alumnus, is a Professor and the Founding Director of RoMeLa (Robotics & Mechanisms Laboratory) of the Mechanical & Aerospace Engineering Department at UCLA. His research focuses on robot locomotion and manipulation, autonomous vehicles and humanoid robots. He is the inventor of a number of novel robots and mechanisms, including the 'whole skin locomotion' for mobile robots inspired by how amoeba move, a unique three-legged waking robot STriDER, an air-powered robotic hand RAPHaEL, and the world's first car that can be driven by the blind. His work has been featured on numerous national and international media. Washington Post magazine called Dr. Hong "the Leonardo da Vinci of robots."

Dr. Hong has been named to Popular Science's 8th annual "Brilliant 10", honoring top scientists younger than 40 years of age from across the United States, "Forward Under 40" by the University of Wisconsin-Madison Alumni Association, and also honored as "Top 40 Under 40" alumni by Purdue University. Hong's other past awards include the National Science Foundation's CAREER award, the SAE International's Ralph R. Teetor Educational Award, and the ASME Freudenstein / GM Young Investigator Award to name a few. Dr. Hong also actively leads student teams for various international robotics and design competitions winning numerous top prizes including the DARPA Urban Challenge where they won third place and the \$500,000 prize, and the RoboCup, the international autonomous robot soccer competition where his team is now a five-time World Champions in the Humanoid divisions and brought the Louis Vuitton Cup Best Humanoid Award to the United States for the very first time.

Dr. Hong received his B.S. degree in Mechanical Engineering from the University of Wisconsin-Madison (1994), his M.S. and Ph.D. degrees in Mechanical Engineering from Purdue University (1999, 2002).

He is also a serious gourmet chef and a magician performing annual charity magic shows and lectures on the science of magic.



# Professor Wing-Huen Ip

Academia Sinica, Taiwan

KEYNOTE 11 TOPIC To Dream the Impossible Dream

#### DATE

Sunday 10<sup>th</sup> July 2022 Time: 10:50–12:00

Wing-Huen Ip is Kwok-Ting Li Chair Professor at the Institute of Astronomy, National Central University (NCU), Taiwan. He worked at the Max-Planck Institute for Aeronomy (now Max-Planck Institute for Solar System Research) as staff scientist for 20 years before returning to Taiwan in 1998 to teach. He served as Dean of Science and Vice President of NCU and then as Vice President of the University System of Taiwan. Among many community service activities, he was Founding President of the Asia Oceania Geosciences Society (AOGS) with Headquarters in Singapore.

Ip received his Bachelor degree in physics from the Chinese University of Hong Kong, Master degree from the University of Pittsburgh and PhD from the University of California at San Diego. He holds an honorary doctoral degree from the Macau University of Science and Technology. His research interests cover from planetary science, space plasma physics to exoplanets. He participated in several major planetary exploration missions including the Giotto mission to comet Halley, the Galileo mission to Jupiter, The Cassini-Huygens Project to Saturn and Titan, and the Rosetta mission to comet Churyumov-Gerasimenko.

For his scientific work, he was awarded the NASA Exceptional Public Service Medal, the National Chair of the Ministry of Education of Taiwan, the Axford Medal of AOGS, the Heavenly Quest prize of the Astronomical Society of the Republic of China, the Kuiper Prize of the Division of Planetary Science, American Geophysical Union, the TWAS Prize on Earth, Astronomy and Space Sciences, and the COSPAR Jeoujang Jaw Award. He is Fellow of the American Geophysical Union, Fellow of the Physical Society of the Republic of China, Honorary Member of AOGS, and Academician of Academia Sinica.

Ip is currently leading a science education project called "Taiwan Top Science Student" with a view to enhance astronomy education and brain science to the primary and high school teachers and students, respectively, and to bridge the gender gap in STEM, among other things.



## **Professor Kyungbin Park**

Gachon University, South Korea

#### PRESENTATION TOPIC Case Studies on Artistically Gifted Twice-Exceptional Students in Korea

#### DATE

Thursday 7<sup>th</sup> July 2022 Time: 13:30–15:00 Symposium 1 Twice Exceptionality

Kyungbin Park is a full professor in the Department of Early Childhood Education at Gachon University, Korea. She has worked to implement the law for gifted education in Korea, and is a member of the advisory committees to several national organizations in Korea on gifted education. Her main interest areas are in creativity, intelligence, socio-emotional development and gifted education in early childhood. She was elected as the President of the Asia-Pacific Federation for Giftedness (2012~2014 and 2016~2018), and is now a member of the executive committee. She also served as the President for Korean Society for the Gifted (2012-2015). She has written articles and books on identification, evaluation, trends of research on gifted education, and characteristics of gifted students in Korea, as well as intercultural comparisons in gifted education. She has also developed assessment tools to aid in identification and instruction for gifted learners



### **Associate Professor**

### **Usanee Anuruthwong**

Association for Developing Potentials and Giftedness, Thailand

PRESENTATION TOPIC Twice-Exceptional Children DATE

Thursday 7<sup>th</sup> July 2022 Time: 13:30–15:00 **Symposium 1 Twice Exceptionality** 

Assoc. Prof. Dr. Usanee Anuruthwong is one the pioneers in the field of gifted education in Thailand. She has dedicated her life in the field of gifted and special education since 1980 as a senior instructor, researcher, counselor, author, national committee (s), and a volunteer for various works on child development, children with special needs, as well as the disadvantage groups.

She has helped to establish many national organizations and local organizations to support children with special needs and the early childhood such as:

Special school for the gifted Association for developing Human Potentials and Giftedness Institute for Developing Thinking Skills Parents Club for the deaf Excellent Center(s) for Identifying and Naturing Children with Special needs and disadvantage group

Centers for the homeless and disadvantaged children at the Thai Red Cross.

She is one of the key persons to develop National Act, National Plan and National Policy for the gifted and the Chairperson to develop National Plan for the Early childhood in Thailand.

Dr. Usanee Anuruthwong has published more than 400 articles for teachers and parents, 15 books, and 33 research studies. Over four decades she promotes knowledge on giftedness and child development to the public through radio and television programs, magazines and newspapers including seminars, workshops, and trainings across the country. She was invited as a keynote speaker for international conferences. She is the President of the Asia-Pacific Federation on Giftedness and presently is a Chairperson of the Association for Developing Human Potentials and Giftedness.



### **Professor Jan Burns**

Canterbury Christ Church University, UK

#### PRESENTATION TOPIC Make Room on the Podium! The Pathway to Becoming an Elite Athlete with Intellectual Disabilities

#### DATE

Thursday 7<sup>th</sup> July 2022 Time: 13:30–15:00 **Symposium 1 Twice Exceptionality** 

Professor Burns is Emeritus Professor of Clinical Psychology and Academic Lead of the Centre for Sport, Physical Education and Activity Research (Spear) at Canterbury Christ Church University (CCCU), UK. Previously, she was Director of the Salomons Institute for Applied Psychology, and Head of the School of Psychology, Politics and Sociology. Prof Burns has been a researcher focussing on the lives of people with intellectual disabilities, throughout her career, and in the last decade specifically on sport as a vehicle to increase the quality for life and opportunities for people with intellectual disabilities. Prof Burns worked with an international team to develop Paralympic classification processes to re-allow athletes with intellectual disabilities to compete in the Paralympics which was achieved for the London 2012 Games. This research received the Gold Award for Exceptional Research contribution to the Olympic/Paralympics, awarded by the Research Councils UK, and Prof Burns was featured as Paralympic scientist in Nature. Prof Burns is an Non Executive Board member of both Virtus: World Intellectual Impairment Sport and Special Olympics Great Britain. Prof Burns remains very active in research related to sport and people with intellectual disabilities, and is currently working with the International Paralympic Committee on developing classification.

Professor Burns completed a BSc in Psychology in Manchester, a PhD at the University of Cardiff and then trained as a Clinical Psychologist at the University of Leeds. She then worked for the National Health Service, as a clinician and service manager in services for people with intellectual disabilities, before becoming a researcher and academic first at the University of Leeds, and subsequently CCCU. In 2015 she was awarded a Member of the British Empire (MBE) medal by the Queen for her service to people with intellectual disabilities.



### **Professor Ching-Chih Kuo**

National Taiwan Normal University, Taiwan

PRESENTATION TOPIC Expanding the Conception of Giftedness to Talent Development

#### DATE

Friday 8th July 2022 Time: 13:30–15:00 Symposium 2 Terminological Controversies in Gifted Education

Ching-Chih Kuo, PhD, is a professor in the Department of Special Education at National Taiwan Normal University. She has been involved in special education for over 40 years. Her research areas are education policy, identification, multiple intelligence, guidance and counseling, overexcitabilities, twice exceptionality, brain study, as well as the cognitive, social, and emotional development of individuals with special needs. Her most recent work has focused on the talent development of twice-exceptional individuals, and she has been engaged in the development of policies and programs on twice exceptionality at national and local government levels. Dr. Kuo serves on many national and international advisory boards and committees dedicated to gifted education and special education. She was elected president of the Asia-Pacific Federation on Giftedness for 2006–2008 and 2014–2016 and now acts as vice-president.



### **Professor Uğur Sak**

Anadolu University, Turkey

#### PRESENTATION TOPIC Terminology Matters: A Historical Analysis of the Term Giftedness

#### DATE

Friday 8th July 2022 Time: 13:30–15:00 Symposium 2 Terminological Controversies in Gifted Education

Uğur Sak is a professor of special and talented education at Anadolu University. He founded and worked as the director of the Center for Research and Practice for High Ability Education and founded the graduate programs in gifted education at Anadolu University. He is currently the editor-in-chief of Gifted Education International and the founding editor of the Turkish Journal of Giftedness and Education. His scientific research has focused on developing original models on the identification and education of gifted students, assessment of creativity and intelligence. He developed the first national intelligence scale, Anadolu Sak Intelligence Scale (ASIS), in Turkey and is the author of Selective Problem Solving Model (SPS), Creative Reversal Act (CREACT), and the co-author of Creative Scientific Ability Test (C-SAT) and the Test of Scientific Creativity Animations for Children (TOSCAC). His most recent work is the Fuzzy Theory of Giftedness. He is the recipient of the best academician award of the year-2016 in education selected by Artı Education in Turkey. He was the principal investigator of a nationwide project in Turkey supported by the Ministry of Education to develop the first national K12 curriculum for the education of talented students. He serves on the advisory boards of several journals in gifted education. He has been an active participant in social networks in gifted education, being an executive board member of the Asia-Pacific Federation on Giftedness and a member of the qualification committee of the European Talent Support Network.



### **Associate Professor Pei-Ying Lin**

University of Saskatchewan, Canada

#### PRESENTATION TOPIC

Accessibility, Accommodation, Modification, Strategy, or Intervention? A Discussion on terminologies that Often Confuse Educators

#### DATE

Friday 8th July 2022 Time: 13:30–15:00 Symposium 2 Terminological Controversies in Gifted Education

Dr. Pei-Ying Lin is an Associate professor at the Department of Educational Psychology and Special Education of the University of Saskatchewan, works with diverse populations of children, youth, parents, in-service and pre-service teachers, university faculty members and staff as well as testing agencies over the years. Her research interests include the use of varied research methods- quantitative, qualitative, mixed methods, and experimental approaches- for studying instructional and assessment practices and policies for students with special needs, gifted children, and English language learners. She continues working on an array of research projects since her doctorate at the Ontario Institute for Studies in Education of the University of Toronto. Recently, Dr. Lin and her team embarked on a project to better understand how Canadian teachers make decisions on how best to help students with special needs needing instructional and test accommodations. Her team is currently developing an evidence-based, online teacher decision-making program to help teachers across the country with training. Dr. Lin, as PI of the project, is grateful that this research has been funded by the Social Sciences and Humanities Research Council of Canada (SSHRC). More information about Dr. Lin and her work can be found at:

https://education.usask.ca/profiles/lin.php#About



### **Associate Professor Mantak Yuen**

The University of Hong Kong, Hong Kong, China

#### PRESENTATION TOPIC

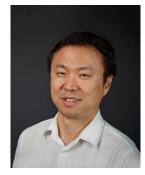
Life Satisfaction of Gifted Adolescents: Relations with Career Self-Efficacy, Perseverance of Effort and Adaptability to Situations

#### DATE

Saturday 9<sup>th</sup> July 2022 Time: 10:50-12:00 Symposium 3 Career Development and Well-being of Gifted

Dr. Mantak Yuen is Associate Professor and Director of the Laboratory and Program for Creativity and Talent Development, Centre for Advancement in Inclusive and Special Education, Faculty of Education at the University of Hong Kong. He is a registered counselling and educational psychologist, and a certified counselor, approved supervisor and Fellow of the Hong Kong Professional Counselling Association. His academic and professional interests focus on guidance and counselling, life career and talent development, gifted education, positive psychology, and special needs education. At the University of Hong Kong, Dr. Yuen co-ordinates the HKU Faculty of Education MEd course in Guidance and Counselling as well as Career Education and Gifted Education courses. He has developed and validated The Life Skills Development Self-Efficacy Inventories, which are the first measurement tools for assessing Asian adolescents' self-efficacy in applying life skills in the domains of academic, personal-social, and career and talent development.

His work has been published in High Ability Studies, Journal of Vocational Behavior, School Psychology Quarterly, and Thinking Skills and Creativity. His current research is investigating links among students' life skills and talent development, self-efficacy, connectedness, meaning in life, career development and well-being, and school-based counseling and socialemotional learning programs. He is a delegate to the World Council for Gifted and Talented Children and a member of the Executive Committee of the Asia-Pacific Federation on Giftedness. He is the editor of Nurturing Talents, newsletter of the Asia-Pacific Federation on Giftedness.



## Associate Professor Jae Yup Jared Jung

The University of New South Wales, Australia

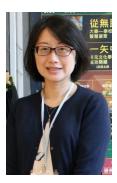
PRESENTATION TOPIC The Career Development of Gifted Students in the Asian Context DATE

Saturday 9<sup>th</sup> July 2022 Time: 10:50-12:00 Symposium 3 Career Development and Well-being of Gifted

Jae Yup Jung, PhD, is an associate professor in the School of Education and the Director of GERRIC at The University of New South Wales, Australia.

His research program incorporates various topics relating to gifted adolescents, with a particular focus on their career-related decisions. His research has been recognized with awards from the American Educational Research Association, the Mensa Education and Research Foundation/Mensa International, and the Society for Vocational Psychology, and grants from the Australian Research Council and the Australian Department of Foreign Affairs and Trade.

He is the current editor of the Australasian Journal of Gifted Education, a member of the Executive Committee of the Asia-Pacific Federation on Giftedness, and a member of the Council of the Australian Association for the Education of the Gifted and Talented.



### **Dr. Serene Chan**

The University of Hong Kong, Hong Kong, China

#### PRESENTATION TOPIC Talent Development and Early Career Awareness: A Creative Cross-Disciplinary Workshop for Primary School Students

#### DATE

Saturday 9<sup>th</sup> July 2022 Time: 10:50-12:00 Symposium 3 Career Development and Well-being of Gifted

Dr. Serene Chan is the Programme Director (Research Development) of the Laboratory and Program for Creativity and Talent Development, Centre for Advancement in Inclusive and Special Education at the Faculty of Education, the University of Hong Kong. She is an experienced language teacher and curriculum developer. She has previously taught in the United States, Costa Rica, and Macau. Her academic interests focus on creativity enhancement, early career awareness, talent development, and teacher training. Currently at the University of Hong Kong, she co-ordinates the Master of Education Specialism in Gifted Education and Talent Development, and she teaches graduate courses in creativity, gifted education, and talent development. In addition, she has extensive experience providing consultancy and curriculum support to teachers in local primary schools and kindergartens. She has assisted in the editing of several issues of the newsletter of the Asia-Pacific Federation on Giftedness.



## Dr. Tobias Schüttler

German Aerospace Center, DLR, Germany

#### WORKSHOP TOPIC

From Aerospace to Science at School: Providing Creative Environments for Young STEM Talents' Research Projects

#### DATE

Thursday 7<sup>th</sup> July 2022 Time: 15:20–16:40

Tobias Schüttler studied Physics and Mathematics at LMU Munich and worked as a high school teacher until 2015. From 2015 until 2021 he worked as a scientific Assistant at the Chair of Physics education at LMU Munich doing his doctorate on out-of-school learning and science-teaching in the context of space technologies. Since 2003 Tobias works at the German Aerospace Center (DLR) in promoting young talents. He is head of the DLR\_School\_Lab, an out-of-school science lab for high-school and university students. His research interests are extracurricular physics teaching and learning in the context of space technologies and gifted education.



## **APCG Online Conference Rooms Links**

## **Cisco Webex**

Session	Venue	Conference Room Link	
Keynote Speech		https://bit.ly/APCGR202	
Invited Symposium	Conorol Building		
Opening Ceremony	General Building		
and Performance	Room 202		
Closing Ceremony			
This link is only for use wi	nen the above link is down https://	/bit.ly/APCGR202spare	
Invited Workshop	General Building	https://bit.ly/ADCCD210	
Poster Presentation	Room 210	https://bit.ly/APCGR210	
This link is only for use wi	when the above link is down https://bit.ly/APCGR210spare		
	Bo-Ai Building Room 103	https://bit.ly/APCGB103	
	Bo-Ai Building Room 112	https://bit.ly/APCGB112	
	Bo-Ai Building Room 113	https://bit.ly/APCGB113	
Paper Presentation	Bo-Ai Building	https://bit.ls/ADCC114227	
	Room 114 and 227	https://bit.ly/APCG114227	
	Bo-Ai Building Room 115	https://bit.ly/APCGB115	
	Bo-Ai Building Room 116	https://bit.ly/APCGB116	

# YouTube Channel Live Streaming Links

	•
General Buildi	ng Room 202
July 7	https://youtu.be/vp22ZNI1Rv4
July 8	https://youtu.be/YKjKw6YLWd8
July 9	https://youtu.be/6zjRGzcz1Ng
July 10	https://youtu.be/QGJ2-4Awnkk
General Buildi	ng Room 210
July 7	https://youtu.be/CtUk5kZB9SM
July 8	https://youtu.be/qbWxbkm5Lak
July 9	https://youtu.be/qSKMEhXp8Tc
July 10	https://youtu.be/5vVLCaw7Dq4
Bo-Ai Buildin	g Room 103
July 7	https://youtu.be/Dlf20Zt7qOk
July 8	https://youtu.be/T0kdAYh4ZsM
July 9	https://youtu.be/6wtpbqdR3fs
Bo-Ai Buildin	g Room 112
July 7	https://youtu.be/O2Xb61cU3wE
July 8	https://youtu.be/XoT1Yktzzrg
July 9	https://youtu.be/EDGe5yOWT1k
Bo-Ai Buildin	g Room 113
July 7	https://youtu.be/W5DtVFgUb34
July 8	https://youtu.be/c6nJq7nvqUo
July 9	https://youtu.be/a7WP5Bh4aQ4
Bo-Ai Building Ro	oom 114 and 227
July 7	https://youtu.be/K8z43PxpfMU
July 8	https://youtu.be/MGhTOOhp6Sw
July 9	https://youtu.be/jl7FPn2iKuw
Bo-Ai Buildin	g Room 115
July 7	https://youtu.be/ILT_TNuqdIw
July 8	https://youtu.be/otH6WZrjEZ4
July 9	https://youtu.be/o_i-DT-Knqs
Bo-Ai Buildin	g Room 116
July 7	https://youtu.be/2Dr8ph_DcGc
July 8	https://youtu.be/IQzS0VIZdfM
July 9	https://youtu.be/868PWahcVU0
	1

# Program Overview (Day1-2)

Physical Venue: B	o-Ai Building ar	nd General Building, NTNU
Virtual Venue: Ciso	co Webex Platf	orm
	8:30-8:45	Registration
	8:45-9:20	Opening Ceremony and Performance
	9:20-10:30	Keynote Speech 1
	10:30-10:50	Coffee Break
	10:50-12:00	Keynote Speech 2
Day 1	10.50-12.00	Paper and Poster Presentation 1
	12:00-13:30	Lunch Break
Thursday	13:30-15:00	Invited Symposium 1
July 7, 2022	13.30-13.00	Paper and Poster Presentation 2
	15:00-15:20	Coffee Break
	15:20-16:50	Keynote Speech 3
	13.20-10.30	Invited Workshop
	16:50-17:30	Paper and Poster Presentation 3
		2020-2022 APFG General Assembly
	8:30-9:00	Registration
	9:00-9:20	Event and Performance Video Retrospective
	9:20-10:30	Keynote Speech 4
	10:30-10:50	Coffee Break
Day 2	10:50-12:00	Keynote Speech 5
Day 2		Paper and Poster Presentation 4
Friday	12:00-13:30	Lunch Break
July 8, 2022	13:30-15:00	Invited Symposium 2
···· <b>j</b> ···	10.00-10.00	Paper and Poster Presentation 5
	15:00-15:20	Coffee Break
	15:20-16:30	Keynote Speech 6
	16:30-17:30	2020-2022 APFG Delegates Meeting

# **Program Overview (Day 3-4)**

	8:30-9:00	Registration
	9:00-9:20	Event and Performance Video Retrospective
	9:20-10:30	Keynote Speech 7
	10:30-10:50	Coffee Break
Day 3	10:50-12:00	Invited Symposium 3
	10.30-12.00	Paper and Poster Presentation 6
Saturday	12:00-13:30	Lunch Break
July 9, 2022	13:30-14:40	Keynote Speech 8
	14:40-15:00	Coffee Break
	15:00-16:10	Keynote Speech 9
	40.40 47.00	2022-2024 APFG Executive Committee
	16:10-17:00	Meeting
	8:30-9:00	Registration
Day 4	9:00-9:20	Event and Performance Video Retrospective
	9:20-10:30	Keynote Speech 10
Sunday	10:30-10:50	Coffee Break
July 10, 2022	10:50-12:00	Keynote Speech 11
	12:00-12:40	Closing Ceremony

# **Program for the Opening Ceremony**

#### Thursday, July 7<sup>th</sup>, 2022 08:30 – 09:20

08:30 - 08:45	Arrival of guests and delegates
08:45 - 09:00	Performances:
	Piano and violin performance
	by Gavin Chen
	Piano performance
	by Emily Tsai
09:00 - 09:15	Opening Address by Conference Chairs
	Political Deputy Minister Ching-Hua Tsai
	Ministry of Education, Republic of China (Taiwan)
	President Cheng-Chih Wu
	National Taiwan Normal University
	Welcome Address by
	President Usanee Anuruthwong
	Asia-Pacific Federation of Giftedness
	Emcee
	Dr. Christine Chifen Tseng,
	National Taichung University of Science and Technology
09:15 – 09:20	Group Photo Session



### **Gavin Chen**

Gavin Chen now majored in Bachelor Program in Popular Music at HSING WU University. He was diagnosed with moderate Autism at the age of two, and had extreme difficulty understanding language expressions, making the learning process very difficult. He had shown his musical talent since childhood, and has an absolute sense of sound. He was inspired by his mother and gradually showed his prominence in music competitions. In addition to winning the National Mental Disability Talent Competition for four consecutive years, he also began to challenge himself in competition with general students. In major music competitions such as the 2019 Asia Music Competition for Young Artists Busan Korea and Piano Competition of Taiwan International Classical and Traditional Music Awards, the 2018 Piano Competition of Taiwan Music Competition, the 2017 Excellence International Music Open Competition of Taiwan, and the 2016 International Asia Music Competition, he all won the first place! In particular, in 2017, he was voted by the jury as the "Young Musician Excellence Award".

In order to overcome the obstacles of interaction with people, Gavin joined the string orchestra. With his continuous efforts, he represented the school to attend the National Student Music Competition and won the first place, which is a rare achievement!

Gavin continued to push through the limitations of Autism, representing Taiwan to Hong Kong to compete and win the "Talent Excellence Award(才藝卓越獎)", he was more enthusiastic about public welfare and participated in many charity fundraising performances. In recent years, he had actively participated in cross-strait special education exchange activities, and had been invited to Chinese mainland to participate in cross-strait forum performances, and also invited to Shanghai Concert Hall and Guangzhou Zhongshan Hall to play a violin concerto with the South China Normal Symphony Orchestra, making great contributions to the promotion of autism and cross-strait special education exchanges!

In addition to his musical talent, Gavin also had a lot of achievements in sports. He was once selected for the Taipei City Swimming Team and won one gold, three silver and one bronze medals at the 2016 National Disabled Games. Especially in Men's 100M backstroke, he broke both the sport record and the national record. He was awarded the "Global Fervent for Love of Lives Medals" and was awarded the "Taipei Outstanding Performance Mayor Award" and the " President Educational Award" in 2019.

Portfolio http://www.gavinchen.com.tw/



### **Emily Tsai**

Piano solo: Emily Tsai Supervising teacher: Yi-Ting Chuang

At birth, suffering from Incontinentia Pigmenti, which led to Retinal detachment and blind, Emily's family found that she would play and sing by herself at the age of two and seven months, and she would play different songs at the same time (playing Twinkle, Twinkle, Little Star with one hand, playing All the Birds Are Already Here with the other hand). She went to Huaguan Kindergarten at the age of three. At the age of five, she was recommended by the kindergarten principal to enroll in the preschool gifted education program conducted by Professor Ching-Chih Kuo, was identified by the professors as a musically gifted student, and learned with Professor Shun-Wen Wu.

In elementary school, she participated in many competitions and won many incredible awards, such as Champion in Picture Stories Regional Competition, 1st prize in the Regional Speech Competition in Hakka, Championship in English Recitation Regional Contest, 4th prize in County Contest, the Second prize of Piano Contest and Award of New Taipei City Ten Braves. When she was in junior high school, she received the President Educational Award through the recommendation and support of her mentor. Also, she published a poetry album, "Eyes of Faith".

In the second semester of her third year in high school, she often fell down when she walked and was examined as a brain tumor. After undergoing Craniotomy, she finally returned home safely after 55 days hospitalization. Then she continued to do two rounds of Chemotherapy and 15 times of electrotherapy. During that time, she also participated in a National piano competition for people with disabilities, and was lucky enough to be a finalist, also enjoyed the grace of traveling in the United States.

On May 1st of this year, she successfully held her graduation concert and graduated from National Taiwan University of the Arts.

#### Johannes Brahms - Rhapsody in b Minor Op.79 No.1, Rhapsody in g Minor Op.79 No.2

Programme Note : Emily MIN-HSUAN, Tsai and Chuang, Yi-Ting

Rhapsody, which flourished in the nineteenth century, was a romantic, national, and fantasistic style, with a different form of music. Completed in 1879, the two Rhapsody were The Works of Brahms in his later years, structured as rigorously as Brahms's personality, while the inner fanatical emotions are embodied in the ornate sound of harmony. A large number of contrasting techniques were used, including style contrast, tonal contrast, expression and strength contrast, etc., to fully display the wild and fiery emotions.

The first song was written in A-B-A Ternary. It began with a passionate and intense (Agitato) B minor A, followed by a contrast to the middle of B major, gentle and lonely. These two periodS not only presented a contrast of major and small tones in tone, but also had a contrasting effect of dark and bright. Brahms used the symphonic composition technique of the piano to present an orchestral sound color in the A period, with heavy weaving and rich tension. The B period presented the middle of the tri-part in a counterpoint manner, making full use of the strong contrasting style between the periods in the trichotomy form, presenting the musical characteristics of Romanticism.

The second song was in G minor, Sonata form, full of enthusiasm but not too fast. Written in the A-B-A Ternary, the first A period was g-minor to D minor, B period was constantly transposed, and the final A-segment remained in g-minor. The variation in the triplet motives of this piece highlighted Brahms's unique style of composition—constructing a massive composition with minimal motivational material. Brahms used small triplet motives to create rich and tense compositions through chromatic interval, modulations, metric modulation, and accompaniment changes.

# **Program for the Closing Ceremony**

#### Sunday, July 10<sup>th</sup>, 2022 12:00–12:40

12:00 - 12:05	Retrospective Video
12:05 – 12:15	Congratulatory Address by Conference Chairs
	Political Deputy Minister Ching-Hua Tsai
	Ministry of Education, Republic of China (Taiwan)
	Executive Vice-President Yao-Ting Sung
	National Taiwan Normal University
12:15 – 12:20	Awards for the Best Paper and Poster Presentations
12:20 – 12:25	Introduction of the Executive Committee of 2022-2024 Asia-Pacific
	Federation on Giftedness (APFG)
12:25 - 12:35	Promotion of 2024 Asia-Pacific Conference on Giftedness
12:35 – 12:40	Appreciation from Organizing Committee Chair
	Prof. Ching-Chih Kuo
	National Taiwan Normal University
	Emcee
	Director Chien-Chi Chu
	Taoyuan Resource Center for Gifted and Talented

# Daily Program: Day 1 (1/2)

Thursday 7 <sup>th</sup> July 2022			
8:30-8:45	Registration	General Building	
0.00-0.40	Registration	2F Aisle	
8:45-9:20	Open Ceremony and Performance	R202	
	Keynote Speech 1		
	Chairperson: Dr. Julia Roberts		
9:20-10:30	Speaker: Prof. Del Siegle	R202	
	Addressing the Elephant in the Room with a Three-		
	Legged Gifted Education Service Approach		
10:30-10:50	Coffee Break	R210	
	Keynote Speech 2		
	Chairperson: Prof. Ting-Fang Wu		
	Speaker: Dr. Lisa Sigafoos	R202	
10:50-12:00	Empowering Disability Identity and Fostering Inclusivity		
10.50-12.00	in Postsecondary Classrooms		
	Paper Presentation 1	B103, B112, B113,	
		B115, B116, B227	
	Poster Presentation 1	R210	
		Speaker	
		B227, B230	
	Lunch Break	Attendee	
12:00-13:30		B103, B112, B113,	
		B115, B116	
		Staff	
		B118	
	Invited Symposium I		
	Chairperson: Prof. I-Tsun Chiang		
13:30-15:00	Speakers:	R202	
	Dr. Usanee Anuruthwong, Prof. Kyungbin Park and Prof. Jan	11202	
	Burns		
	Twice Exceptionality		
	Paper Presentation 2	B103, B112, B113,	
		B115, B116, B227	
	Poster Presentation 2	R210	

# Daily Program: Day 1 (2/2)

		,
Thursday 7 <sup>th</sup> J	uly 2022	
	Keynote Speech 3	
	Chairperson: Prof. Ching-Chih Kuo	
15:20-16:50	Speaker: Prof. Robert J. Sternberg	<b>D</b> 202
15.20-16.50	Transformational Giftedness,	R202
	and Why Our Conventional Definition of Giftedness Has	
	Become a Disservice to Humanity	
	Invited Workshop	
	Chairperson: Prof. Tsu-Yi Fu	
	Speaker: Dr. Tobias Schüttler	<b>D</b> 040
	From Aerospace to Science at School:	R210
	Providing Creative Environments for Young STEM	
	Talents' Research Projects	
	Dener Presentation 2	B103, B112,
16:50-17:30	Paper Presentation 3	B113, B115
	Poster Presentation 3	R210
	2020-2022 APFG General Assembly	R227

# Daily Program: Day 2 (1/2)

Friday 8 <sup>th</sup> July	2022	
9.20 0.00	Desistration	General Building 2F
8:30-9:00	Registration	Aisle
9:00-9:20	Event and Performance Video Retrospective	R202
	Keynote Speech 4	
	Chairperson: Prof. Den-Mo Tsai	
9:20-10:30	Speaker: Prof. Jonathan A. Plucker	R202
	Excellence Gaps 12 Years Later: What We Know About	
	Causes and Solutions	
10:30-10:50	Coffee Break	R210
	Keynote Speech 5	
	Chairperson: Dr. Usanee Anuruthwong	R202
10:50-12:00	Speaker: Asst. Prof. Apichart Pholprasert	R202
10:50-12:00	Advancing Creativity in Visual Arts Talents	
	Paper Propertation 4	B103, B112, B113,
	Paper Presentation 4	B114, B115
	Poster Presentation 4	R210
		Speaker
	Lunch Break	B227, B230
		Attendee
12:00-13:30		B103, B112, B113,
		B114, B115, B116
		Staff
		B118
	Invited Symposium 2	
	Chairperson: Prof. Ching-Chih Kuo	
12.20 15.00	Speakers:	<b>D</b> 202
13:30-15:00	Prof. Ching-Chih Kuo, Prof. Uğur Sak and Prof. Pei-Ying	R202
	Lin	
	Terminological Controversies in Gifted Education	
	Paper Propertation 5	B103, B112, B113,
	Paper Presentation 5	B114, B115, B116
	Poster Presentation 5	R210
	Coffee Break	R210

# Daily Program: Day 2 (2/2)

Friday 8 <sup>th</sup> July 2022		
	Keynote Speech 6	
	Chairperson: Prof. Manabu Sumida	
15:20-16:30	Speaker: Prof. Margaret Sutherland	R202
	The Policy Practice Nexus: Bridging the Gap Between	
	Rhetoric and Reality	
16:30-17:30	2020-2022 APFG Delegates Meeting	R227

# Daily Program: Day 3 (1/2)

		_
Saturday 9 <sup>th</sup>	July 2022	
8:30-9:00	Registration	General Building
		2F Aisle
9:00-9:20	Event and Performance Video Retrospective	R202
	Keynote Speech 7	
	Chairperson: Prof. Hsueh-Chih Chen	
9:20-10:30	Speaker: Prof. Joseph Renzulli	<b>B</b> 202
9.20-10.30	Assessment for Learning: The Missing Element for	R202
	Identifying High Potential in Low Income and Minority	
	Groups	
10:30-	Coffee Breek	<b>D</b> 240
10:50	Coffee Break	R210
	Invited Symposium 3	
	Chairperson: Dr. Mantak Yuen	
	Speakers:	R202
10:50-	Dr. Mantak Yuen, Dr. Jae Yup Jared Jung and Dr. Serene Chan	
12:00	Career Development and Well-being of Gifted Learners	
	Paper Presentation 6	B103, B112,
		B113, B114, B115
	Poster Presentation 6	R210
		Speaker
12:00- 13:30		B227, B230
		Attendee
		B103, B112,
	Lunch Break	B113, B114,
		B115, B116
		Staff
		B118

# Daily Program: Day 3 (2/2)

Saturday 9 <sup>th</sup> J	uly 2022		
	Keynote Speech 8		
	Chairperson: Dr. Quek Chwee Geok		
13:30-14:40	Speaker: Prof. Uğur Sak	R202	
	THE FUZZY THEORY: Implications for the Identification		
	and Education of G&T Students		
14:40-15:00	Coffee Break	R210	
	Keynote Speech 9		
15:00-16:10	Chairperson: Prof. Hsiao-Ping Yu	<b>D</b> 000	
	Speaker: Prof. Albert Ziegler	R202	
	Environmental Boosters of Talent Development		

# **Daily Program: Day 4**

Sunday 10 <sup>th</sup> July 2022		
8:30-9:00	Registration	General
		Building
		2F Aisle
9:00-9:20	Event and Performance Video Retrospective	R202
9:20-10:30	Keynote Speech 10	R202
	Chairperson: Prof. Kyungbin Park	
	Speaker: Prof. Dennis Hong	
	Seeing Things Differently, Connecting Things Unusually	
10:30-10:50	Coffee Break	General
		Building
		2F Aisle
10:50-12:00	Keynote Speech 11	
	Chairperson: Executive Vice President Yao-Ting Sung	R202
	Speaker: Prof. Wing-Huen Ip	
	To Dream the Impossible Dream	
12:00-12:40	Closing Ceremony	R202

Thursday, July 7 <sup>th</sup> , 2022 10:50-12:00		
Group 1 Pap	er Presentation	
Venue	Room B103	
Chairperson	Dr. Yen-Wei Chen	
OTW146 Bra	in Structural Differences between Gifted and Non-Gifted Adults	
in Relation to Daily Life Applications		
<b>Taiwan</b> Dr. Ye	en-Wei Chen, Prof. Ching-Chih Kuo	
OCA11 Arts-	Based Research in Gifted Education: Thoughts from	
Researchers	and Educators	
Canada Miss	Gizem Guryil, Dr. C. Owen Lo, Miss Rachel C. Lin-Yang, Dr.	
Harry Killas, I	Dr. Yuen Sze Michelle Tan	
OCH19 Foste	ering Creativity in Chinese Language Teaching: Expert	
Teachers' Pe	rception and Practices	
China Ms. Qi	an Zhang	
Group 2 Pap	er Presentation	
Venue	Room B112	
Chairperson	Dr. Anna Hui	
OHK132 Diffe	erences in Psychological Correlates between Talented and	
Typical Unde	rgraduate Students: A Preliminary Sharing on Baseline	
Measures of	a Longitudinal Study in Hong Kong	
Hong Kong, China Dr. Anna Hui, Mr. Siu Fai Chan		
OCA55 Investigating Gifted Canadian Secondary Students using		
Combinations of Accommodations for a Literacy Assessment		
Canada Dr. Pei-Ying Lin		
<b>OTW152</b> Challenging the Status Quo of Curriculum Design for the Gifted		
and its Double Gestures of Inclusion/Exclusion		
Taiwan Dr. C	hon lu liu	

Taiwan Dr. Chen Ju Liu

Thursday, 50197*, 2022 10:50-12:00		
Group 3 Paper Presentation		
Venue Room B113		
Chairperson Miss Man Kit Jo Ng		
OHK64 Supporting Young 2e Learners and Parents through Mindfulness		
Practices: 2 Case Studies		
Hong Kong, China Miss Man Kit Jo Ng		
OTW28 A Case Study on the Learning Experience of Inclusive Education for		
Twice Exceptional Students		
<b>Taiwan</b> Ms. Wan-Ying Lin, Prof. Tsuei-Yuan Lai		
OTW30 The Experiences of a Musically Talented Man with Autism Spectrum		
Disorder		
Taiwan Mrs. Min-Ling Liao		
Group 4 Paper Presentation		
Venue Room B115		
Chairperson Mr. Chun-Han Chiang		
<b>OTW54</b> The Linguistic Performance of Gifted Students in Solving Semantic		
and Syntactic Problems		
<b>Taiwan</b> Mr. Chun-Han Chiang, Mr. Chien-Hong Yu, Mr. Chia-Chao Li		
OHK70 Understanding Gifted Students' Self-Assessment of Career		
Adaptability in Hong Kong: A Rasch Analysis of the Psychometric Properties		
of CAAS-SF		
Hong Kong, China Mr Fengzhan Gao, Dr. Lan Yang, Prof. Kuen Fung Sin		
OHK84 Everybody Can Shine: Assessment for Learning in Everyday		
Lessons		
Hang Kang China Dr. Eva Sult mai Chiu		

Hong Kong, China Dr. Eva Suk-mei Chiu

## Thursday, July 7<sup>th</sup>, 2022 10:50-12:00

Thursday, July 7, 2022 10:30-12:00		
Group 5 Paper Presentation		
Venue Room B116		
Chairperson Dr. Tyler Clark		
OUS148 Talent Identification Program of Kentucky: Finding and Serving		
Talent		
United States Dr. Tyler Clark		
OCH105 Construction and Verification of Discovery Model of Preschool		
Children's Superior Talents		
China Mr. Mengliang Shi		
OKO103 The Differences of Creativity and Self-Concept between Gifted and		
General Children		
<b>South Korea</b> Songhyun Park, Heera Bae, Kyunghwa Lee		
Group 6 Paper Presentation		
Venue Room B227		
Chairperson Dr. Sheng-Wei Wang		
OTW144 Life Story of an Artistically Gifted Student with Autism		
Taiwan Dr. Sheng-Wei Wang, Yu-Feng Lin		
<b>OTW68</b> Observation and Reflection Sharing of Two Twice-Exceptional High		
School Students Participating in Participatory Budgeting Initiatives		

Taiwan Miss Chia-Hsin Lu

Thursday, July 7<sup>th</sup>, 2022 10:50-12:00

Venue	Room R210
PTW25 S	Shifting Notions of Giftedness and Talent in the Digital Age
Taiwan N	/Ir. Kun-Ming Lien
PTW37	he Family Experience of Three Highly Gifted Students
<b>Taiwan</b> Ms. Chih-Yun Hsu, Chao-Yi Chen	
PTW50	Siftedness in Light of Egalitarianism and Inclusive Education:
Transacting Talents in All Students	
<b>Taiwan</b> Miss Hui-Ching Lo, Prof. Kuei Fang Tsai, Prof. Chih-Shen Lo	
PTW128	The Support Program of Elite Athlete with and without Disabilities
A Compa	rative Research of Taiwan and International Trends
Taiwan N	/Ir. Han-Lin Yeh, Mr. Yi-Teng Hsu, Mr. I-Tsun Chiang
PTW133	Effects of an Empowerment Training Program for Athletic
Giftednes	ss Students with Disabilities
Taiwan M	/Ir. Yi-Teng Hsu, Mr. Han-Lin Yeh, Mr. I-Tsun Chiang

Thursday, July 7 <sup>th</sup> , 2022 13:30-15:00	
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Thuisday, 501y 7 , 2022 15:50-15:00	
Group 1 Paper Presentation	
Venue Room B103	
Chairperson Dr. Esra Kaskaloglu-Almulla	
<b>OBA12</b> Teachers' Attitude towards the Gifted and Talented Students in	
Inclusive Classroom Settings	
Bahrain Dr. Esra Kaskaloglu-Almulla	
OCH18 Narrative and Identity Analysis of a Gifted Student's Story	
China Ms. Qian Zhang	
<b>OTK141</b> Multimodal Viewings of Pre-Service Mathematics Teachers about	
Gifts and Talents	
Turkey Dr. Zekai AYIK	
<b>OTK149</b> Investigation of Gifted Students' Academic Performance in	
Statistics Tasks Related to Real Covid-19 Pandemic Data	
Turkey Miss Şeyda Aydın, Mr. Mustafa Serdar Köksal	
Group 2 Paper Presentation	
Venue Room B112	
Chairperson Dr. Mohsen Shokoohi-Yekta	
<b>OIR116</b> Effects of the Raising a Thinking Child Program on Parental Self-	
Efficacy and Problem Solving of Parents of Gifted Children	
Iran Dr. Mohsen Shokoohi-Yekta, Dr. SeyedSaeid SajjadiAnari, Dr. Sogand	
Ghasemzadeh	
<b>OAU95</b> What is VHAP? How does the Program Embrace Diversity and	
Nurture the Blooming of Gifted and Talented Students?	
Australia Mrs. Claire Reid, Mrs. Bronwen Martin, Mrs. Marissa Pinkas	
OAU117 Empowering Parents	

Australia Ms. Kathy Harrison, Dr. Susan Nikakis

Thursday, July 7 <sup>th</sup> , 2022 13:30-15:00		
Group 3 Paper Presentation		
Venue Room B113		
Chairperson Dr. Michelle Ronksley-Pavia		
OAU87 Strength-Based Approaches for Supporting Twice-Exceptional		
Learners: A Systematic Literature Review		
Australia Dr. Michelle Ronksley-Pavia, Dr. Janis Hanley		
<b>OTK71</b> Investigating the Metaphorical Perceptions of Pre-School and		
Classroom Teacher Candidates toward Twice-Exceptionality		
Turkey Mr. Mehmet Gürbüz, Mr. Mehmet Atılgan		
OTK123 The Effects of Concrete- Representational- Abstract Interventions		
on the Acquisition of Multiplication Facts for Twice Exceptional Student		
Turkey MA Berna Özer, MA Şerife BİLGİÇ, Dr. Mustafa BALOĞLU		
Group 4 Paper Presentation		
Venue Room B115		
Chairperson Dr. ŞULE GÜÇYETER		
OTK114 From Past to Present Gifted Education Research on Science and		
Art Centers: A Systematic Review		
<b>Turkey</b> Dr. ŞULE GÜÇYETER, Dr. Sezen Camci Erdogan, Dr. Savas Akgul		
OTW136 Models of Identification for the Arts-Talented in Taiwan		
Taiwan Dr. Shun-Wen Wu		
OTK79 Investigation of Perfectionism, Psychological Resilience and Self-		
Compassion Levels of Turkish Gifted Students		
<b>Turkey</b> Dr. Şule Güçyeter, Dr. Faika Şanal Karahan, Mr. Seydi Aktuğ		
<b>OTK121</b> Giftedness and Eye Tracking: A Systematic Literature Review		

Turkey MA Serife Bilgic, Dr. Sema Tan

Thursday, July 7 <sup>th</sup>	, 2022 13:30-15:00
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Group 5 Pap	er Presentation
Venue	Room B116
Chairperson	Dr. Paromita Roy
OID88 Menta	l Health of Talented Students and their Peers from Villages,
Towns, and C	ities in India during Covid-19 Pandemic
India Dr. Par	omita Roy, Mr. Anurag Dey, Ms. Anyesha Mishra
OAR102 Ger	der Differences in Personality Traits of Gifted Adolescents
<b>Armenia</b> Ms.	Madlena Arakelyan
OTW06 Expe	rience Sharing on the Implementation of the Cope and Grow
Model throug	h ODYLP for Music Talented High School Students
<b>Taiwan</b> Ms. 7	īng-Yu Ou
Group 6 Pap	er Presentation
Venue	Room B227
Chairperson	Prof. Ming-Fu Tsai
OTW150 The	Influence of Self-Perception and Family Support on School
Adaptation of	Math/Science Gifted Senior High School Student with Autism
Spectrum Dis	order
<b>Taiwan</b> Prof.	Ming-Fu Tsai, Prof.Yung-Hsiang Chen
OTW36 Disco	overing the Highlights of Children—A Case Study of a Mother
Raising a Twi	ce-Exceptional Child
<b>Taiwan</b> Ms. (	Chih-Yun Huang, Ms. Shu-Min Wu
OTW47 Make	e Me Whole: Maternal Support in the Life of Pianist with Autism
<b>Taiwan</b> Ms. H	lui Jing Ng, Prof. Chin-Hsieh Lu
OTW162 Ang	el of Rare Disease – Life Story on the Talent Development of a
Twice Except	ional Student
Taiwan Ms. L	.i-Jung Lin, Prof. Tsuei-yuan Lai

## Thursday, July 7<sup>th</sup>, 2022 13:30-15:00

Group 6 Poster Presentation		
Venue Room R210		
PSG72 Art Talent Development through Radar Chart Assessment		
Singapore Ms. Mo Wang		
PKO80 Analysis of Mental Wellbeing and Mental Psychopathology of Gifted		
Students by Emotional and Social Developmental Process Perspective		
South Korea Ms. Kwang Surk Jung		
PTW57 Adolescent Leadership in Taiwan: Exploring the Relationship among		
Multiple Assessments and their Predictor Variables		
Taiwan Dr. Sheng-Min Cheng		
PTW101 The Construction Research of the Multiple Perfectionism Scale for		
Elementary School Students		
Taiwan Ms. Min-Ying Tsai		
PTW137 Discussing the Mechanism of Artistic Ability Identification of		
Disability Students in Taiwan Based on the Identification Rate of Twice-		
Exceptional Students		
Taiwan Ms. YingHsiu Lai		
PTW143 The Psychological Adjustment Experience of Canadian Gifted		
Students in Participating Accelerated Education		
Taiwan Ms. Wang Hsin-Yi, Prof. Ching-Chih Kuo		

The second sec	
Thursday, July 7 <sup>th</sup> , 2022 16:50-17:30 Group 1 Paper Presentation	
Venue Room B103	
Chairperson Dr. Fitriani Yustikasari Lubis	
<b>OIN29</b> The Relationship of Self-Compassion and Emotional Well-Being in	
Academically High Ability Students	
Indonesia Dr. Fitriani Yustikasari Lubis, Ms. Tia Fitriani, Dr. Fitri A Abidin	
<b>OTW32</b> A Narrative Exploration on the Reconciling Multiple Identities of a	
Gay Medical student	
Taiwan Mr. Tzu-Hung Wei	
Group 2 Paper Presentation	
Venue Room B112	
Chairperson Dr. Endang Widyorini	
<b>OIN91</b> The Relationship between Intelligence and Executive Function among	
Gifted Adolescents	
Indonesia Dr. Endang Widyorini	
OSG48 Be Kind to Yourself: Strengthening Students' Growth Mindset and	
Well-being with Self-Compassion	
Singapore Ms. Chiat Hwee Lim, Ms. E-Lynn Goh, Mdm Kavitha D/O	
Selvananthan	
Group 3 Paper Presentation	
Venue Room B113	
Chairperson A.P. Nur Eva	
<b>OIN109</b> Peer Support Scale Development for Junior High-School Gifted	
Students in Indonesia	
Indonesia A.P. Nur Eva, Sri Andayani, Moh Bisri, Jelita Kumalasari	
<b>OTW127</b> Comparison of Over-Excitability, Perfectionism, and Autism	

Spectrum Traits among High School Students in Different Classes

Taiwan Miss Chao-Chun Liao, Chin-Shueh Chen, Ching-Chih Kuo

Thursday, July 7 <sup>th</sup> , 2022 16:50-17:30			
Group 4 Paper Presentation			
Venue Room B115			
Chairperson Dr. Jessie Chow			
OHK17 Celebrating Giftedness: Developing Pre-Service Teachers'			
Readiness in Gifted Education			
Hong Kong, China Dr. Jessie Chow			
OSG26 The Integrated Programme (IP) School Teacher's Role, in			
Singapore's Gifted Education Programme (GEP)			
Singapore Mr. Eugene Chua			
Group 5 Poster Presentation			
Venue Room R210			
PCH41 Research on the Development of Geography Curriculum to Help			
Gifted Children's Geography Learning			
China Mrs. Ruomei Song, Miss Jiemin Li			
PKO131 Comparison of Teacher and Student Perceptions of Mentoring			
Programs for the Underprivileged			
South Korea Jiseon Kim, Seongsil Gim, Yuri Jung, Jiyoung Ryu			
<b>PTW34</b> Exploring the Effectiveness of a Teacher-Designed, Interdisciplinary			
Learning Activity on Soil Biology and Scientific Illustration			
<b>Taiwan</b> Ms. Yi Ting Lai, Prof. Chih-Shen Lo, Mr. Shun Fu Hu, Prof. Kuei			
Fang Tsai			
PTW49 The Study on the Course Quality of Independent Research in Taipei			
City's Elementary Gifted Education			
Taiwan Prof. Chen-Ming Chen, Miss You-Zhen Dai, Prof. Chih-Shen Lo,			
Prof. Kuei Fang Tsai			

_	Friday, July 8 <sup>th</sup> , 2	2022 10:50-12:00
	Group 1 Paper F	Presentation
	Venue F	Room B103
	Chairperson N	Irs. Tina Harlow
	OUS124 World H	lope Project: Gifted Children from Around the World Express
	their Voices and S	Sharing their Vision for the Future
_	United States M	rs. Tina Harlow, Mrs. Rosa Medina
-	OCA22 Stories o	f Radical Acceleration: A Canadian Perspective
	Canada Miss Ra	chel C. Lin-Yang, Dr. C. Owen Lo, Dr. Joanna E. Cannon, Dr.
	Kim T. Zebehazy	
-	OCH43 The Rese	earch on the Influence of Role Model Education to Gifted
	Students	
_	China Miss Zimo	Hu
	Group 2 Paper F	Presentation
	Venue	Room B112
	Chairperson	Dr SeyedSaeid SajjadiAnari
	OCA145 Analyzir	ng Mothers' Attitudes about Intelligence: Understanding
	Challenges and N	Veeds
	Canada Dr. Seye	edSaeid SajjadiAnari, Ms. SorayaSeyedeh Alavinezhad, Ms.
_	Masoumeh Zabe	ti
	OCH40 The Rela	tionship between Mental Health and Parental Bonding of 10-
	year-old Intellectu	ually Gifted Children
_	China Miss Yi Wa	ang, Ms. Jing He, Miss Lihong Wang
-	OTW31 A Study of	on the Data analysis of Research Literature on Family Parenting
	Styles of Cifted S	Students in Taiwan

Styles of Gifted Students in Taiwan

Taiwan Mr. Hsin-Hung Wu, Prof. Tsuei-Yuan Lai

Friday, July	8 <sup>th</sup> , 2022	10:50-12:00
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Friday, July 8	<sup>an</sup> , 2022 10:50-12:00
Group 3 Pape	er Presentation
Venue	Room B113
Chairperson	Mr. Mehmet Hilmi Saglam
OCA05 Explan	natory Factors Predicting Reading Success of Academically
Gifted Student	ts through the Perspective of Ecological Model
Canada Mr. M	lehmet Hilmi Saglam, Dr. Talha Goktenturk
OHK08 Self-R	egulated Learning Strategies of Gifted Students in Online
Learning Prog	rams
Hong Kong, C	China Dr. Tze-ho Fung, Ms. Wing Yi Li
OTW53 An Inr	novative English Course Design in a Traditional Prestigious
Senior High Se	chool
Taiwan Mr. Ch	nien-Chi Chu, Mr. Chien-Hong Yu
Group 4 Pape	er Presentation
Venue	Room B114
Chairperson	A.P. Kai-Ju Huang
OTW35 Devel	oping Inquiry Abilities: Independent Study—Concept and Case
Analysis	
<b>Taiwan</b> A.P. K	ai-Ju Huang, Doctoral Candidate Shu-Hau Jang
OCH58 Curric	ulum Development of the Original English Book Reading
Instruction for	the Intellectually Gifted Children
<b>China</b> Mrs. Zh	iihui Wang
OHK69 Enhar	ncing Equality in Learning Opportunity—Develop Effective
School-Based	Enrichment Programmes for Underachievers with High Ability

Hong Kong, China Prof. Kuen Fung Kenneth Sin

Friday,	July 8 <sup>tl</sup>	<sup>h</sup> , 2022	10:50-12:0	0
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Thuay, July 6	5, 2022 10.50-12.00
Group 5 Pap	er Presentation
Venue	Room B115
Chairperson	Dr.Serene Chan
OHK135 Tead	ching for Creativity in an Online Course
Hong Kong,	China Dr. Serene Chan
OCH107 The	Effect of Practical Life-Centered Math on Three Kinds of
Intelligent Chi	ildren
China A.P. Ku	uo-Hsuan Cheng
OTW73 The L	_earning Effects and Differences of Mathematically Gifted
Students with	Different Learning Styles of Application of Merging Music into
Science Lear	ning, A Case Study of Circular Motion
<b>Taiwan</b> Mr. Ye	enhung Shen
Group 6 Pos	ter Presentation
Venue	Room R210
PCA115 Effect	ctiveness of Group Counseling on Enhancing Communication
Skills and Sel	f-Esteem in Gifted Students
Canada Dr. S	SeyedSaeid SajjadiAnari, Dr. C. Owen Lo
PKO164 The	Effect of Children's Peer Play Interaction on Elementary School
Students' Acad	lemic Performance Academic Ability and School Adjustment as
Mediating Fact	ors
South Korea	Prof. Hyunsook Shim
PTW33 Conc	erns about 12-Year Basic Education Competency-Based
Curriculum Im	plementation of Teachers for the Gifted
<b>Taiwan</b> Prof.	Wei-Ren Chen
PTW98 A Stu	dy on Gifted Students' Learning Need and Learning Satisfaction
in Junior High	n Schools
<b>Taiwan</b> Ms. Y	′uan-Jung Wu, Prof. Hsiao-Ping Yu
PTW104 The	Preliminary Practices on Seligman's Happiness Course: Studies
on its Implem	entation and Effectiveness for Junior-high Language Gifted
Studentss	
Taiwan Chyo	ng Wen Yan
DTW151 Each	tor Structure of Overexcitabilities Questionnaire for Students in

**PTW151** Factor Structure of Overexcitabilities Questionnaire for Students in Elementary School: Focusing on Exploratory Factor Analysis

Taiwan Prof. Ming-Fu Tsai, Mr. Tsung-Hsien Li

Friday, July 8 <sup>th</sup> ,	2022 13:30-15:00
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Venue Room B103

Chairperson Dr. Sezen Camci Erdogan

OTK110 Early Childhood Gifted Education in the 2000s

Turkey Dr. Sezen Camci Erdogan, Mrs. Belgin Bagriacik, Mrs. Kubra Yigit

Tekel, Ms. Melike Sule Yildiz, Mr. Sait Burak Yilmaz, Ms. Emine Nur Yucel,

Mrs.Madina Gultekin, Ms. Aysenur Keser

**OAU86** The Provision of Advanced Curriculum Topics to Gifted Students: Research and Practice

Australia Dr. Mirella Olivier

**OTW20** Project Based Learning Applied in Mathematics and Science Learning

Taiwan Mr. Kun-Ming Lien

Group 2 Paper Presentation

Venue Room B112

Chairperson Mrs. Bronwen Martin

**OAU94** Striving to Put Theory into Practice. Insights from the Victorian High Ability English Program (VHAP)

Australia Mrs. Bronwen Martin, Mrs. Claire Reid, Mrs. Marissa Pinkas

OHK07 Study Skills and Personality Characteristics of Gifted Student

Members and Its Impacts to Online Learning during COVID-19

Hong Kong, China Dr. Tze-ho Fung, Ms. Man Chun Ngan

**OTW45** Facilitating Students' Science Learning by Using Their Notes as Literacy Assessment

Taiwan Mei Huei Li, Yung Chiau Tsao

**OAE138** The Impact of Program Activities Based on the Theory of Unlimited Talent in the Development of the Skills of Divergent and the Development of Motivation for Creativity for the Basic Phase

United Arab Emirates Dr. Fatema Matar

Friday, J	July 8 <sup>th</sup> ,	2022	13:30-15:00
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Group 3 Pap	per Presentation
Venue	Room B113
Chairperson	Asst. Prof. Tugba Aydın Yıldız
OTK77 A Me	ta-Synthesis Analysis on EFL: Gifted Students
Turkey Asst.	Prof. Tugba Aydın Yıldız
OJP65 Gifte	dness in Inclusive Classrooms – Cross-cultural Examination of
Student Tead	chers' Thinking in Five Countries
Japan Dr. Er	rkki T. Lassila, Dr. Eeva Kaisa Hyry-Beihammer, Dr. Oktay
Kizkapan, Dr	r. Angela Rocena, Dr. Manabu Sumida
OTK60 Enha	ancing the Use of Augmented and Virtual Reality in the Teaching
of Gifted Stu	dents: Suggestions for the Current Practice
Turkey Dr. E	ngin Karaduman, Dr. Avni Yıldız
OTK140 How	w to Design Challenging Reading Materials for Gifted Students?
Turkey Dr. D	Davut Gül
Group 4 Pap	per Presentation
Venue	Room B114
Chairperson	Prof. Manabu Sumida
OJP118 Onli	ine STEAM Education Programme for Gifted Young Girls during
the COVID-1	9 Pandemic
<b>Japan</b> Prof.	Manabu Sumida
OHK63 Cons	solidating Professional Competency in Gifted Education and
Talent Devel	opment through Practicum: A case in Hong Kong
Hong Kong,	China Miss Man Kit Jo Ng
OTW24 A Su	rvey on Autonomous Learning of Regular Students and Gifted
Students in J	Junior High School
<b>Taiwan</b> Mr. (	Chang-Hsin Liu
<b>OTW163</b> A S	Study on the Effectiveness of High School Gifted Students
Participating	in Leadership Associations
	Chi-chien Chang, Prof. Tsuei-yuan Lai

Group 5 Pap	per Presentation
Venue	Room B115
Chairperson	Prof. Hsiao-Ping Yu
OTW51 The	Talent Development Process of Gifted Students Based on
Autonomous	Learning Theory: Related Factors Exploration
Taiwan Prof.	Hsiao-Ping Yu
OSA106 Dist	inguished Ophthalmologists' Perceptions of the Factors
Leading to th	eir Excellence
Saudi Arabia	a Mrs. Malak Alabdullatif, Ph.D. Abdullah Aljughaiman, Dr.
Abdulhamid A	Alarfaj
OTW38 The	Boosts and Impediments in Talent Development: The
Experience o	f Profoundly Talented Students Achieving in International Junic
Science Olyn	npiad
<b>Taiwan</b> Mr. H	long-Ren Chen, Mr. Jia-Shuo Li
OTK78 Using	g Metaphors to Examine Preservice Teachers' Opinions on
Creativity	
Turkey Dr. Bl	EYHAN CAN, Dr. ŞULE GÜÇYETER
Group 6 Pap	per Presentation
Venue	Room B116
Chairperson	Dr. János Gordon Győri
OHG159 Wh	o is the Shadow of Whom in Gifted Education: The Case of
Asian Countr	ies
Hungary Dr.	János Gordon Győri
OHK142 Gift	ed Education Professional Training: A Pre-Service Teacher's
Reflection an	d Inspiration
Hong Kong,	<b>China</b> Mr. Tim Yan Lam, Ms. Jo Ng
OIN46 The In	nplementation of Gifted Education in Indonesia
Indonesia M	s. Fadhilla Najmi Qinthara, Mrs. Fitriani Yustikasari Lubis
OTW52 A Cro	oss-Country Comparison of the Development on Gifted
Education Ac	ts, Policies, and Practices in Taiwan and Finland
	u-Jung Tsao, Mr. Chien-Hong Yu

## Friday, July 8<sup>th</sup>, 2022 13:30-15:00

Group 7 Poster Presentation
Venue Room R210
PCH39 A Practical Research on Designing Group Psychological Counseling
for Gifted Children with ARCS Model
China Miss Lihong Wang, Mrs. Jing He, Miss Yi Wang
PCH42 Physics Curriculum Compacting in Gifted Education
China Mr. Feng Wei
PK059 What is the Effect of Self-Determination on Creativity of Early
Childhood Teachers? Does Failure Tolerance Make a Difference?
South Korea Sukyoung Lee, Yun Jung Lee, Prof. Kyungbin Park
PKO113 The Mediating Effect of Self-Directed Learning Ability on the
Relationship between Creative School Environment and Future Creative
Confluence Competency
South Korea Prof. JuSung Jun, Prof. Kyung-Hwa Lee
PTW21 A Correlational Study on Creative Aptitude, Creative Environment,
and Independent Study Capabilities among Grades 5-6 Gifted Students
Taiwan Mr. Shih Chi Kung, Prof. Chen-Ming Chen, Prof. Chih-Shen Lo, Prof.
Kuei Fang Tsai
PTW67 Talent Developmental Trajectory of Socio-Economically
Disadvantaged Superior Students
Taiwan Dr. Chia Chao Li
PTW147 An Exploratory Study of Gifted Students' Scientific Learning
Attitudes through Making Natural Environment Models
Taiwan Mr. Hung-Lun Pan

Saturday, July 9 <sup>th</sup> , 2022 10:50-12:00			
Group 1 Pape	er Presentation		
Venue	Room B103		
Chairperson	Mr. Samuel Young		
OUS165 RS2e: Reimagining Socializing for Twice-Exceptional Students			
United States Mr. Samuel Young			
OTW100 Leland Lee, A Twice-Exceptional Learner where Autism Takes a			
Back Seat			
Taiwan Mr. Leland Lee, Ms. Karen Chien, Ms. Michele Chang			
Group 2 Pape	er Presentation		
Venue	Room B112		
Chairperson	Mr. Albert Tsang		
<b>OHK27</b> Empowering Teachers in Nurturing Creative and Critical Thinkers			
through Design Thinking			
Hong Kong, China Mr. Albert Tsang			
<b>OKO112</b> Development and Validation of 'Integrated Creative Achievement			
Test' for University Students			
South Korea Miss Heera Bae, Prof. Kyunghwa Lee			
OTW119 The Creative Teaching Crisis to Primary Teachers from the			
Creative Competency Indicators			
<b>Taiwan</b> Mr. Kuang-Yu Yang			
Group 3 Pape	er Presentation		
Venue	Room B113		
Chairperson	Mr. Rex Forteza		
OKO56 Mapping Professional Teaching Competencies for Gifted and			
Talented within the Philippine Professional Standards for Teachers			
South Korea Mr. Rex Forteza			
OKO61 Early	Childhood Math Education Program Based on Sternberg's		

**OKO61** Early Childhood Math Education Program Based on Sternberg's

Theory of Successful Intelligence: Development and Effects

South Korea Mrs. Jeong Im Koh

Saturday, July 9 <sup>th</sup> , 2022 10:50-12:00				
	Group 4 Paper Presentation			
	Venue	Room B114		
	Chairperson	Mrs. Ya-Chi Wang		
	<b>OTW111</b> The Application of Blended Teaching Strategies in Gifted			
	Curriculum Design			
	Taiwan Mrs. Ya-Chi Wang			
	OHK09 A Study on the Psychological Characteristics of Gifted Students			
	Enrolled in Entrepreneurship Programme			
	Hong Kong, China Mr. Chung-Po Wong, Dr. Ka-Ming Edwin Mok, Dr. Tze-			
	Ho Eric Fung			
	OKO120 Global Leader Program based on Global Leader Model (GLM) and			
	Multiple Intelligence (MI) for Young Children			
South Korea Dr. Eun Ju Choi, Kyunghwa Lee				
Group 5 Paper Presentation				
	Venue	Room B115		
_	Chairperson	Mr. Carl Chung		
	<b>OHK76</b> Positive Psychology and Social Competence of Gifted Teenagers:			
	Become a Better Friendsmaker			
Hong Kong, China Mr. Carl Chung				
	OIN122 Comparing Grit among Sport-Talented High School Students across			
	Three Differentiated Talent Development School Programs			
	Indonesia Ms. Shahnaz Safitri, Ms. Brendha Christie Tanujaya			
	OKO130 Ret	rospective Perceptions on the Emotional Experiences of Gifted		

**OKO130** Retrospective Perceptions on the Emotional Experiences of Gifted College Students during their School Days

South Korea Dr. Jiyoung Ryu, Dr. Jiseon Kim, Ms. Mijin Kim, Ms. Yuri Jeong

## Saturday, July 9<sup>th</sup>, 2022 10:50-12:00

Group 6 Poster Presentation			
Venue	Room R210		
PCA108 Improving Underachievement among Underachieving Students by			
Executive-Functions based Cognitive Empowerment Training			
Canada Ms. Hanieh Yavari, Dr. C. Owen Lo			
PKO125 The Effect of Social Support on Teaching Efficacy about Play in			
Teachers of Early Childhood Education: Investigating the Mediating effect of			
Ideation			
South Kore	South Korea Kyoungsook Kim, Prof. Kyungbin Park		
PKO126 The Effect of Ideation on Happiness for Teachers in Early			
Childhood Education: Focused on the Mediating Effect of Efficacy of			
Teaching Play			
South Korea Prof. Kyungbin Park, Kyoung-Sook Kim, Jeonghwa Moon			
PTW75 An Exploration and Preliminary Evaluation of School-Based			
Compassionate Mind Cultivation(SBCMC) for Gifted Students in Junior High			
School	School		
Taiwan A.P. Chih-Hsuan Chang			
PTW93 The	e Advance of Modern Intelligence Theory and the Trend in Gifted		
Education under the Framework of Talent Development			
<b>Taiwan</b> Ms	Taiwan Ms. Pei-Yu Lan		
<b>PTW97</b> A S	tudy on Learning Style and Learning Needs of Introverted Gifted		
Students			

Taiwan Miss Hsiang-Ju Lo, Prof. Mei-Fang Chen



### Keynote 1 Professor Del Siegle

Addressing the Elephant in the Room with a Three-Legged Gifted Education Service Approach

#### ABSTRACT

We share a strength-based talent development model that provides (1) opportunities for subject-specific and whole-grade acceleration, (2) increased depth and complexity in classroom instruction, and (3) environments for students to expand their interests. We do this without the stigma of labeling or failing to label students as gifted. Each year many schools spend millions of dollars on tests to identify students as gifted. In some schools, the entire gifted budget is spent on testing, with little left to provide services for those students who are identified. In the U.S., some states require schools to identify gifted students, but do not require schools to provide services to the students they identify. At a time when the field of gifted education is under attack over its failure to proportionally identify and serve students from underserved populations, we need to rethink the paradigm that has dominated the field for the last half century. In this session, we propose a gifted education service model built on the premise that (1) there are students with academic, emotional, and social needs that cannot be met without some modification of their education experience, (2) the current gifted education model is not meeting their needs very well and is missing students who could benefit from an effective model that does meet these needs, and (3) it may be possible to meet these needs without formally labeling students as "gifted" or "not gifted" because they failed to meet a set score on an assessment. We ask, which is more important, the label or the service? We believe the service is more important. We propose a three-legged service approach using the best from acceleration and enrichment research.

## Thursday 7<sup>th</sup> July 2022 <u>10:50-12:00 Room 202, General Building, Library Campus</u>

## Keynote 2 Dr. Lisa Sigafoos

Empowering Disability Identity and Fostering Inclusivity in Postsecondary Classrooms

### ABSTRACT



## Keynote 3 Professor Robert J. Sternberg

Transformational Giftedness, and Why Our Conventional Definition of Giftedness Has Become a Disservice to Humanity

#### ABSTRACT

Giftedness as it is usually conceived of is a transactional personal characteristic. Certain young people are identified as "gifted." In exchange for this identification, they are expected to perform well in school and, later, in their jobs, and to excel in other culturally prescribed criteria. In exchange, they receive special benefits, such as faster tracks in school, often better teachers, superior college and university admissions, better jobs, and more income. The problem with this transaction between the individual and the school is that it takes into account the egocentric needs of the individual but not, sufficiently, the common good of the world. Too many gifted youths are making a Faustian bargain, receiving benefits in exchange for jobs such as finding ways of addicting children to social media, creating more and more powerful munitions for aggressive and right, now, unforgivable wars, and generating the industrial output that will increase global climate change. I suggest in the talk that we pay more attention to the identification and especially the development of transformational giftedness, which is giftedness directed toward creating a better world--toward making a positive, meaningful, and enduring difference to the world as a whole. The world no longer can afford to develop giftedness that benefits only individuals and not the collective good of humankind and the diverse species that populate the Earth. And it certainly cannot afford to develop the kind of pseudo-transformational, toxic giftedness that so many leaders show in the world today. These toxic leaders pretend to benefit their followers, when in fact they only care about the accrual of power and resources to themselves.

### Friday 8<sup>th</sup> July 2022 09:20–10:30 Room 202, General Building, Library Campus

## Keynote 4 Professor Jonathan A. Plucker

Excellence Gaps 12 Years Later: What We Know About Causes and Solutions

#### ABSTRACT

The first paper on excellence gaps was published in 2010. In the dozen years since that original report, researchers and educators have learned a great deal about excellence gaps. In this talk, we will review the current state of the research on causes of excellence gaps and strategies for shrinking and eventually eliminating them.

## Keynote 5 Assistant Professor Apichart Pholprasert

Advancing Creativity in Visual Arts Talents

#### ABSTRACT

This keynote presentation will assert values of art to children's development and how to advance creativity within art practice of students with artistic talent. The first section will begin with indications why art should be promoted in every child and advanced in those who have special talent. It will highlight contributions of art to children's development in diverse skills needed for their quality growth. While emphasizing on the chief benefits of art in promoting creativity and imagination, this presentation also demonstrates how art can promote human well-being in diverse dimensions throughout lifespans.

Gifted and talented students require special attention and supports in order to excel their abilities. Formal school curriculum and structure often have limitation in providing fulfilling enrichment for the needs of talented and gifted students. Thus, the second part of this presentation will investigate into major talented art educational programs in Thailand, especially those organized by the Office of the Basic Education Commission, the Ministry of Education, and significant projects supported by private sectors that have successfully implemented diverse strategies to advance gifted students' creativity and imagination. The discussion will cover numerous underpinning factors that foster students' creativity development in art creation. It will examine talented identification process, curriculum design, instructor team, environment setting, and interdisciplinary exercises such as art and science and technology, visual literacy, music, culture and literature that form a unique set of activities for advancing creativity in visual arts talented students.

## Keynote 6 Professor Margaret Sutherland

The Policy Practice Nexus: Bridging the Gap Between Rhetoric and Reality

#### ABSTRACT

In this presentation, the many issues associated with the career development of gifted students in Asia will be outlined. In particular, the role of factors including cultural values, family influence, income, security, prestige, gender role expectations, career indecision, interest, enjoyment, and intellectual stimulation will be discussed. This will be followed by a comparison between the many issues influencing the career development of gifted students in Asian and non-Asian contexts. Thereafter, some models of career development will be reviewed with reference to the key issues surrounding the career development of gifted students in Asia. The presentation will conclude with some thoughts and reflections about the possible future of career development of gifted students in Asia.

## Saturday 9<sup>th</sup> July 2022 09:20–10:30 Room 202, General Building, Library Campus

### Keynote 7 Professor Joseph Renzulli

Assessment for Learning: The Missing Element for Identifying High Potential in Low Income and Minority Groups

#### ABSTRACT

A major controversy facing the field of gifted education is the underrepresentation of low income, minority, and dual language students. Strategies for addressing this challenge have been to use universal screening and local norms; however, these useful recommendations continue to focus on traditional testing procedures that measure what students already know and overlook other important traits that contribute to high levels of creative productivity. Assessment for learning examines traits such as interests, instructional preference styles, preferred modes of expression, and executive function skills. Although sometimes referred as the "soft skills," they have gained much more attention on the parts of college admission officers and employers, especially for higher level leadership positions. Instruments that assess these traits are often completed by the students themselves; and technology and artificial intelligence now allow us to administer and analyze them with the same ease used for traditional standardized tests.

### Keynote 8 Professor Uğur Sak

#### THE FUZZY THEORY

Implications for the Identification and Education of G&T Students

#### ABSTRACT

The Fuzzy Theory of Giftedness (FTG) posits that conceptions and practices concerning giftedness are vague. In this talk, first, I will discuss the vagueness of the concept "giftedness," with an emphasis on problems related to vagueness in conceptions of giftedness. Then, I explain the Fuzzy Theory of Giftedness and suggest identification and education practices based on this conception. Understood from a cultural point of view, giftedness concept is rooted in socifacts (e.g., organizations), artifacts (e.g., material objects) and mentifacts (e.g., mental constructions). The concept mentifact is used to describe the mental component of a culture as mental constructions of a society (e.g., creation, intelligence, giftedness) that transform over generations, and thus, become transposed into new constructions. Conceptions of giftedness cannot be isolated from mentifacts as these conceptions are mental constructions engrained in cultural experience. That is, giftedness is not a biological fact, but rather a mentifact. The most important characteristic of giftedness is its mentifact system. As a system, the FTG is composed of personal dispositions, stimulus conditions and the between- and within-group interaction of personal dispositions and stimulus conditions. The manifestation of giftedness is situated in the interaction between personal dispositions and stimulus conditions. The FTG suggests no identification, but selection of those who can develop efficient interactions with environmental conditions. According to the FTG model, the selection of gifted students should be a two-phase process: 1) natural selection and 2) adaptive retention. Person-environment interactions for talent development are rather unique and personal; therefore, trait-treatment interaction and expertise-reversal-effect models are ideal educational adaptations for talent development. Therefore, according to the FTG model, gifted education should evolve into person-environment interactions that foster talent development.

## Keynote 9 Professor Albert Ziegler

Environmental Boosters of Talent Development

### ABSTRACT

Even nativist talent models had recognized early on that talent cannot be developed without a stimulating environment. The view that true talent would always prevail was therefore quickly dismissed as a myth. Nevertheless, disproportionately more attention was paid to the structure of talent and its internal catalysts. In contrast, what specifically characterizes a stimulating environment was never established. To be sure, it quickly became clear that certain people (for example, parents and peers), objects (for example, toys, learning materials), settings (for example, libraries, classrooms), and systems (for example, schools and families) play a crucial role for talent development. However, no elaborate theory has ever been presented that encompassed the elements of such environments, as well as their interaction and the ways in which they can be regulated. Accordingly, the presentation addresses three questions:

1) What exactly distinguishes effective from less effective environments?

2) Are there particularly stimulating environments in which individuals are unequally more likely to develop their talents?

3) How can these insights be used for talent support?

The answer to the first question is educational and learning capital, i.e. exogenous (located in the talent's environment) and specifically corresponding endogenous (located in the talent's person) learning resources. Talents need the latter to exploit the exogenous learning resources.

To answer the second question, an environmental typology is introduced and illustrated with examples. They include the two poles of an "atope" (environments that have no supportive effect at all) and a "megatope" (environments with an extremely high level of support).

To answer the third question, several maxims on the future course of talent education are presented.

## Keynote 10 Professor Dennis Hong

Seeing Things Differently, Connecting Things Unusually

### ABSTRACT

At our robotics lab RoMeLa (Robotics & Mechanisms Laboratory) we create novel robots that move in all kinds of different ways. From robots that walk with two legs like a human to novel wheel-leg hybrid robots, our creations always impress people not only in the field of robotics but also amazes the general public. Walking, rolling, jumping robots with two, three, four, six legs or a robot that can move in all directions with just a single wheel, robots with never before seen morphology capture the imagination and inspire people. Where do these ideas come from? How do we come up with such ideas? We believe creativity is not necessarily the ability to come up with something new that has not existed before, but rather the ability to connect things that are not directly related. In this talk, secrets of our creative process will be presented with specific examples, how we apply these approaches to education and family.

### Sunday 10<sup>th</sup> July 2022 <u>10:50-12:00 Room 202, General Building, Library Campus</u>

## Keynote 11 Professor Wing-Huen Ip

To Dream the Impossible Dream

#### ABSTRACT

What would be the impossible dream of an educator, especially that of a science educator?

I suppose that we all want one if not more of our young students to one day be a Nobel prize winner or Fields medalist. Or, some of them could be like Elon Musk or Mark Zuckerberg heading world-shaking high-tech companies. What are then the basic ingredients and shared traits of Nobel prize winners? They include creativity, open-mindedness, persistence and collaborative spirits. The discovery of the Double Helix by Francis Crick and Jim Watson is an outstanding example. As for Elon Musk and Mark Zuckerberg, the common denominator would probably be empire building mentality, vision, hyperproductivity and individuality. No wonder that one of Zuckerberg's favorite books is "World Order" by Henry Kissinger, and "Foundation" by Issac Asimov is a must-read for Musk. Knowing these critical elements of academic achievements and entrepreneurship, how can we inject them into the curricula and extra-curricular activities of our students, gifted or not. Is this an impossible dream? But what would Elon Musk or Mark Zuckerberg say to that? Invited Symposium 1 Twice Exceptionality

Presentation 1 Dr. Usanee Anuruthwong

Twice-exceptional Children

#### ABSTRACT

The term 'twice exceptional' refers to intellectually gifted children who also have one or more disabilities. In recent years, there has been an increase in research into twice-exceptionality. This has occurred as a result of growing awareness of the real challenges that these children face. In the past, most children with a single disability will have been defined by their particular disability-specific special needs or difficulties. The situation is much more complex with children who have a combination of disabilities coupled with high intelligence. In some cases, their high ability may not be recognized, due for example to problems with speech and communication, or with movement and coordination. In my experience supporting gifted children, I discovered that many cases had been misdiagnosed as having mental illness, intellectual disability, or autism. This misdiagnosis had led to inappropriate placement, nurturing, and teaching. Often these potentially gifted learners were insufficiently stimulated throughout their life. I believe that today we are still at the beginning of fully understanding human potential, and providing successful programs for these twiceexceptional children. Understanding their uniqueness and seeking to turn on their potential to ignite their giftedness—and at the same time, overcome their weaknesses-must become a new trend in all schools.

## Presentation 2 Professor Kyungbin Park

Case studies on artistically gifted twice-exceptional students in Korea

#### ABSTRACT

The term twice–exceptional learner was coined in the mid-1990s to refer to students with gifts and talents in one or more domains in conjunction with one or more disabilities. Twice-exceptional students have unique needs as they maintain both characteristics of giftedness and disability. No singular profile exists for twice exceptionality because of its wide range of traits and combinations of giftedness and disabilities, thus the ways of supporting them can vastly differ.

The topic of twice–exceptional learners is still underexplored among many societies and researchers. In South Korea, the first article introducing the concept of twice–exceptional learners and their educational intervention came out in 2002, and only 21 peer-reviewed journal articles were published over the following 20 years, yielding on average only one study per year. Lack of special attention to twice-exceptional learners may pose a challenge to their talent development and the contributions they could make to human society at large.

In this presentation, despite the limited awareness in Korean society for twice exceptional children, case studies of twice–exceptional young artists in Korea will be introduced. The study will be focused on how these youngsters' talents came to fruition and discuss some ways our society can nurture their unique giftedness.

## Presentation 3 Professor Jan Burns

Make room on the podium! The pathway to becoming an elite athlete with intellectual disabilities

#### ABSTRACT

"Don't think about the start of the race, think about the ending." – Usain Bolt

For elite athletes like Usain Bolt the ending of the race is to be standing on a podium, holding the world record for sprinting 100m and receiving a gold medal at the Olympics. It is also about placing a marker in history, becoming a role model, and inspiring a whole generation of youth, encouraging them to believe that they too can achieve this success, no matter where they started this race. All elite athletes will tell you that success is not just about athletic talent, but having the mind-set, determination, support and opportunity to turn this talent into the best in the world. For people with intellectual disabilities to become elite athletes the same applies, but the race might be more challenging, beset with inequalities, low expectations and less opportunities, in addition to compensating for what having intellectual disabilities actually means for sporting performance. However, athletes with intellectual disabilities do compete, albeit as a minority, and stand on the Paralympic podium to receive their medals. The Tokyo Paralympics was estimated to have been watched by 4.25 billion people, presenting a unique opportunity to highlight to the public the extraordinary accomplishments of these athletes with intellectual disabilities. This presentation will examine this journey in more detail, both considering the personal characteristics of these unique athletes and the contexts they need to thrive. The significance of the need to share the space on these elite podiums will be discussed in relation to not only the impact on their lives, but also for others who do not share such opportunities.

## Friday 8<sup>th</sup> July 2022 <u>13:30–16:50 Room 202, General Building, Library Campus</u>

# Invited Symposium 2 Terminological Controversies in Gifted Education

### Presentation 1 Professor Ching-Chih Kuo

Expanding the Conception of Giftedness to Talent Development

#### ABSTRACT

To determine if a person is gifted or not, the government sets the criteria of identification since giftedness is an abstract concept. However, the standard has always been decided and affected by the attitudes of the education authority and the allocation of resources. The opportunities for some potential learners to participate in gifted programs are often closed because of high identification criteria on standardized tests, especially intelligence tests. To bridge the achievement and the opportunity gaps between regular and gifted students with disabilities or different cultural backgrounds, educators are encouraged to apply the talent development model to develop hidden potential rather than focus on identification or labeling students as "gifted." Every child is unique and has strengths and weakness. It is time to change the rigid concept of giftedness and expand the concept to discover multiple talents. The most important aspect is no longer defining intelligence merely as g or IQ.

# Presentation 2 Professor Uğur Sak

Terminology Matters: A Historical Analysis of the Term Giftedness

#### ABSTRACT

The field of gifted education needs terminological transitions. The utility and the scientific basis of the term giftedness recently have taken strong critics in gifted education Researchers have tried to restructure an amorphous construct, giftedness, to adopt it to educational settings rather than inventing or using scientific or educational terms preferred in many disciplines to signify human abilities.

The construct giftedness came into existence as a religious invention to convey the sacredness of churches and priests. The fingerprints of divinity, the Industrial Revolution, nationalism, and the Cold War are evident in the history of the development of the term giftedness and its varieties, such as aptitude and talent. For example, the trends in the use of giftedness, aptitude, and talent in printed publications have seemingly differed in line with significant historical events, displaying distinct trajectories. Based on historical analysis, this article briefly presents how the term giftedness emerged and was adopted by educators and scientists and how it is now losing significance in education and science. I argue that the term giftedness has limited the progress in gifted education and suggest a terminological redirection that can encourage multidisciplinary contributions to gifted education.

# Presentation 3 Dr. Pei-Ying Lin

Accessibility, Accommodation, Modification, Strategy, or Intervention? A Discussion on terminologies that Often Confuse Educators

#### ABSTRACT

The international Organisation for Economic Co-operation and Development (OECD) recognized that the numbers of students needing accommodations are increasing exponentially (OECD, 2013), and recommendations were made that accessibility and accommodation plans should also be in place to support these children during the COVID-19 pandemic (Ontario Ministry for Seniors and Accessibility, 2020). Over the decades, a variety of test accommodations (e.g., setting, extended time, computer) have been offered to these students who participate in large-scale and classroom assessments. For instance, I found that 69 accommodation packages were offered to gifted students needing accommodations (n = 525) who wrote a provincial literacy test in 2015 (Ontario Secondary School Literacy Test [OSSLT])(Lin & Lin, 2018). In particular, 82.75% of these students in Canada received more than one accommodation. The changes, known as accommodations, that are made to test administrations should support students in managing the difficulties resulting from their disabilities and ensure the students have equitable access to the content for both instruction and assessment. However, such changes should not alter the test constructs being measured. There are important distinctions between the several terminologies used in this field, including accessibility and accommodation, modification, strategy, and intervention. These terminologies are often misunderstood and misused by educators at K-12 and postsecondary institutions over time. In this presentation I will discuss each terminology based on the theories and practices of special education, assessment, and educational measurement. Discussions will be accompanied by examples to help the audience better understand the distinctions among the terminologies that often confuse educators.

# Saturday 9<sup>th</sup> July 2022 <u>10:50-12:00 Room 202, General Building, Library Campus</u>

# Invited Symposium 3 Career Development and Well-being of Gifted Learners

### Presentation 1 Dr. Mantak Yuen

Life Satisfaction of Gifted Adolescents: Relations with Career Self-Efficacy, Perseverance of Effort and Adaptability to Situations

# ABSTRACT

A critical review of literature on life satisfaction of adolescents will be provided, together with details from two studies. The first investigated psychometric properties of Brief Multidimensional Students' Life Satisfaction Scale BMSLSS with Chinese gifted adolescents. Results indicated high internal consistency and a one-factor solution. The second study examined associations among variables of perseverance of effort, adaptability to situations, and students' life satisfaction. It was found that perseverance was linked to higher levels of life satisfaction, while adaptability was indirectly linked to life satisfaction via career development self-efficacy. Practical strategies for enhancing life satisfaction of gifted adolescents will be discussed.

# Presentation 2 Dr. Jae Yup Jared Jung

The Career Development of Gifted Students in the Asian Context

#### ABSTRACT

In this presentation, the many issues associated with the career development of gifted students in Asia will be outlined. In particular, the role of factors including cultural values, family influence, income, security, prestige, gender role expectations, career indecision, interest, enjoyment, and intellectual stimulation will be discussed. This will be followed by a comparison between the many issues influencing the career development of gifted students in Asian and non-Asian contexts. Thereafter, some models of career development will be reviewed with reference to the key issues surrounding the career development of gifted students in Asia. The presentation will conclude with some thoughts and reflections about the possible future of career development of gifted students in Asia.

# Presentation 3 Dr. Serene Chan

Talent development and early career awareness: A creative cross-disciplinary workshop for primary school students

#### ABSTRACT

Early career awareness activities can be useful for children's growth and development. Having increased knowledge about adult occupations may affect children's talent development in positive ways. In this presentation, findings from a career development workshop for children aged 7 to 9 will be shared. In the workshop, children expressed their career aspirations through creative means. To explore the children's conceptions of future aspirations, their creative work was analysed and interviews were conducted. It was found that these activities heightened children's self-awareness and helped develop their talents. Practical implications and suggestions for further research will be discussed.

#### Dr. Tobias Schüttler

From Aerospace to Science at School: Providing Creative Environments for Young STEM Talents' Research Projects

#### ABSTRACT

Innovative research projects are especially suited for supporting talents by bringing them into close contact with state-of-the-art research and development in the area of STEM (Science, Technology, Engineering, and Mathematics). A stimulating project with clearly defined objective groups of gifted school students can raise their limits of previous knowledge. By means of self-structured team action they are enabled to conduct targeted research and develop a defined innovative result.

This workshop presents practical examples of aerospace-related school student research projects, including their basic conception, organizational conditions, and the essential aspects of planning and implementation. The supporting and stimulating role of teachers, university students and scientists is emphasized, especially by initiating a creative project idea and by structuring the project in an adequate way: Due to the great importance of creativity for all phases of such projects, the basic concepts of creativity and giftedness are addressed. Furthermore, it is demonstrated that Project-based Learning provides a suitable concept for such complex student research activities.

#### **OTW146**

# Brain Structural Differences Between Gifted and Non-Gifted Adults in Relation to Daily Life Applications

#### Yen-Wei Chen<sup>1</sup>, Ching-Chih Kuo<sup>2\*</sup>

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<sup>2</sup> Department of Special Education, National Taiwan Normal University

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#### ABSTRACT

Many studies indicate that the brain structure of mathematically gifted students is different from that of non-gifted students in terms of the brain regions such as precuneus, precentral gyrus, medial frontal gyrus, superior frontal gyrus, and superior occipital gyrus. These regions are associated with IQ, executive functions, high-order thinking, deductive reasoning, memory, and spatial information processing. Previous studies also found the nodes inside the brain local region of mathematically gifted students performed better communication efficiency compared to non-gifted students (Kuo et al., 2019; Wu, & Kuo, 2020). However, the dimensions and intensities of abilities required to be used in life, work and study are not consistent. Therefore, the main purpose of this study is to investigate how mathematically gifted adults perceive and use the aforementioned cognitive abilities in their lives. This study interviewed six mathematically gifted adults with an average age between 26 and 29. They are currently employed or studying for a doctoral degree. Two of them are engaged in the service industry, four of them are working in mathematics-related fields, with one enrolled in a doctoral program of mathematics-related research institute. The results show that the mathematically gifted adults often use spatial information, critical thinking, logical reasoning, and metacognition in life, and perform executive functions in planning, performing tasks, and dealing with interpersonal relationships. But their memory ability is different due to the difference of memory materials, and their arithmetic skills and high-level mathematical knowledge are less employed in life.

#### **KEYWORDS**

Mathematical and Scientific Talent, Gifted Adult, Intelligence, Brain Structure

#### OCA11

# Arts-Based Research in Gifted Education: Thoughts from Researchers and Educators

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#### ABSTRACT

Why study giftedness via film? Considering the diverse profiles and complex needs of gifted children, arts-based research (ABR), and documentary in particular, provides new insights into gifted individuals and gifted and talented education (GATE). Despite the intriguing research potential of documentaries, little has been said about how documentaries can be used as a more systematic and comprehensive research tool. The goal of the study is to understand the field practitioners' perspectives, considerations, and inspirations regarding ABR and research-based documentary. This study aims to answer the following questions: (1) How is arts-based research perceived in GATE? (2) As a form of media-based research can a documentary disseminate knowledge effectively to academics and educators? (3) What are possible opportunities and further directions to extend the employability of documentaries in GATE and educational research in general? The study employed an experimental design using one-shot case study. The screenings of the documentary were treated as an intervention. Research participants (N=135) included K-12 teachers, graduate students, and university researchers/lecturers/faculty members who participated in two international conferences (the 67th Annual Convention of the National Association for Gifted Children (NAGC) and the 16th Asia Pacific Conference on Giftedness (APCG)). Chi-square test of independence, Mann-Whitney U, and Kruskal-Wallis H tests were utilized for analysis. Despite providing encouraging insights for the use of ABR, researchers were concerned about funding, a lack of art skills, and time commitment. If provided more funding opportunities, collaborators for technologies, participants would be inclined to conduct ABR. The study holds the distinction of being the first to examine the perceptions of ABR in GATE professionals. This study would help practitioners and researchers to comprehend the challenges of ABR, facilitate the removal of barriers that block the employment of documentaries in research, and develop a better understanding of the unique trajectories of highly able learners.

#### **KEYWORDS**

Gifted Education, Arts-Based Research, Documentary, Knowledge Dissemination, Experimental Research

#### OCH19

# Fostering Creativity in Chinese Language Teaching: Expert Teachers' Perception and Practices

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#### ABSTRACT

Creativity is an important component in the framework of 21st Century skills. Research has mentioned that there was a gap between researchers' conceptions of creativity and teachers' beliefs in general. However, little is known about the creativity fostering beliefs and practices of teachers in the specific discipline of Chinese language and arts, which is thought to be infused with Confucian culture and negatively stereotyped as authoritarian teaching, naturally opposing any individual creativity. This case study aims to explore the perception and instructional behaviors on creativity fostering of an expert Chinese teacher, who satisfies the Chinese government's training requirements for Chinese teaching, including specific academic qualifications and professional attributes; thus, the study can represent as a 'paradigmatic case' (Flyvbjerg 2001). With the consent of the participants, the data were collected through the Creativity Fostering Teacher Behavior Index (Soh, 2002) and a follow-up interview framed by Newton & Beverton (2012). The results revealed that the participant teacher's conception of creativity fostering is fragmentary and superficial. On the one hand, it is more related to art and culture. On the other hand, it ignores the importance of audience, affordance, and the interactions among the whole creative fostering system. For creativity fostering practices, the teacher lacks specific teaching strategies in containing domains that seem unrelated to art or literature. And the confidence to overcome the challenges hindering creativity is low. It is obvious to be addressed in the teacher training programs and it should be also considered for educational policymakers to balance the curriculum standards and highly competitive assessment which hinders creativity.

#### **KEYWORDS**

Teachers' Conception; Creative Beliefs; Chinese Teaching; Case Study

#### OHK132

Differences in Psychological Correlates between Talented and Typical Undergraduate Students: A Preliminary Sharing on Baseline Measures of a Longitudinal Study in Hong Kong

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#### ABSTRACT

The talent development process involves four important elements: definition of talent, relationships between faculty members and students, how the curriculum transforms talent, and how talent students and typical students develop along with one another (Subotnik, 2004). Based on the best practices in identifying academically gifted and talented students (Worrell & Erwin, 2011), outstanding academic achievement is one of the criteria that screens students into talent programs. The student profile with personal characteristics, self-evaluation, learning strategies, and perceived competence may also inform what types of programs (enrichment, acceleration, dual programs in specialized academic domains and etc.). The present study aims at examining the educational experience and outcomes of undergraduate students in programs with talent development features. This paper will share the baseline measures of a longitudinal study on the learning experiences of typical and talented students in a public university in Hong Kong. The whole study will complete in the end of 2022. It is hypothesized that students' academic engagement and performance, core self-evaluations, study and learning strategies, and perceived holistic competencies will be significantly higher in talent programs, when comparing with students from typical programs. A sample of 64 talented and 22 typical undergraduate students is recruited. Significant differences were found in conscientiousness, cultural sensitivity and global citizenship, interpersonal and leadership competencies, problem-solving and critical thinking skills, and information literacy. Implications will be discussed.

#### **KEYWORDS**

Talent Development, Equity and Excellence Gaps, Personality and Psychological Characteristics

#### OCA55

# Investigating Gifted Canadian Secondary Students using Combinations of Accommodations for a Literacy Assessment

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#### ABSTRACT

Appropriate accommodation practices help ensure valid and meaningful test results. Thus, it is imperative to investigate the effectiveness of single type (e.g., extra testing time) and varied combinations of accommodations (e.g., extra time, computer, assistive technology) used in gifted students writing assessments. The present study examined the chance that gifted students had to achieve the provincial literacy standards in Ontario, Canada in relation to whether or not they received specific accommodation packages for a large-scale literacy test in 2014 and 2015. Of all test takers enrolled in the 2014 program (N = 208,369), 1.6% of the students were formally identified as gifted (n = 3278). Similarly, 1.6% of the students were identified as gifted (n = 3285) among all examinees included in this program in 2015 (N =199,816). Further, it was found that 79 and 69 accommodation packages were offered to gifted students needing accommodations in two years, respectively (n =501 in 2014; n = 525). In particular, gifted students in both years used 53 identical packages and the other 42 packages were different for both years. To better interpret the relationships between accommodations and student performances, odds and odds ratio for accommodated gifted and non-accommodated typically developing students were computed separately for each package used in two years. An adjustment method was also employed to adjust the estimations of odds ratio from unbalanced samples. Results indicate that the likelihood of meeting the provincial standards differed among gifted test takers depending on whether they did or did not receive certain combinations of accommodations for the literacy test in both years. The findings of the current study suggest that stakeholders should review the accommodations that produced significant differential effects to ensure the test results are interpreted validly and fairly for gifted students.

#### KEYWORDS

Assessment Practices, Gifted Education, Large-Scale Assessment, Test Accommodations, Canada 118

#### **OTW152**

# Challenging the Status Quo of Curriculum Design for the Gifted and its Double Gestures of Inclusion/Exclusion

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#### ABSTRACT

It has long been debated that regular educational environments are not in support of a thrusting future outlook for gifted students. A mismatch between the special needs of gifted students and the educational challenges offered to them is reflected in lower school performance, reduced personal well-being, and students' learning motivation. Aligned with this Deweyan discourse— regarding schooling as fulfilling one's potential, it's thus taken for granted in modern educational settings to offer "gifted" students "customized" programs to combat underachievement. However, statisticsinformed classification systems are deployed to help form academic disciplines, as individuals get sorted and reclassified in ways that separate them from their "immediate historical situation". Against this backdrop, in this paper, I work to disassemble categorical understandings of difference by problematizing some ways the curriculum of the alternative gifted, programs and their imagined gifted students "mismatch" is conceptualized in its practices.

By tracing the systems of reason beneath two gifted programs currently adopted in Taiwan's high schools, i.e. Advanced Placement (AP) Capstone program, and the International Baccalaureate (IB) diploma program, I utilize Foucault's notions of genealogy and post-qualitative research practice to engage with theoretical and methodological perspectives as a way "to rethink difference beyond binary opposition." This engagement with ongoing academic programs explores the knottiness of the discursive practices and materialities that contribute to the inclusion of essentialized identity categories and simultaneously their processes of exclusion. I want to articulate:

· the representative practices of these subjectivities; and

• the complex relationships amongst privileged subjectivities in the costumed, gifted programs; and

• the ways that researchers and educators need to deploy to rethink the power and positioning of the instructional space and its role in representation.

As to the substantiated conclusions or implications, this paper contributes to an

emergent body of work that assumes that "people (namely, the gifted)"-or their material bodies "do not pre-exist as such but rather materialize together with their particular boundaries always through mapping practices". Thus, costumed, gifted programs, which conventionally are well-intended, are limited to account for, let alone serve, the complexity of the students being included /excluded in the practices of schooling.

#### **KEYWORDS**

Gifted Education, Inclusion, Privilege, Curriculum Design, Post-Structuralism

#### OHK64

# Supporting Young 2e Learners and Parents through Mindfulness Practices: 2 Case Studies

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#### ABSTRACT

Acknowledging the developmental, learning, and social-emotional needs of twiceexceptional (2e) learners are vital to their holistic growth. Timely intervention with feasible skills, emotional and behavioural regulation with an open attitude can support both young 2e learners and parents to adopt a strength-based approach to overcome hurdles.

The author as an instructor initiated two on-site enrichment programs for 2e learners with a parent seminar in 2019 under a university's creativity and talent development centre in Hong Kong. The programs aimed at cultivating a positive identity and enhancing self-efficacy with mindfulness practices for young learners with suspected / diagnosed attention deficit hyperactivity disorder and learning difficulties in reading and writing respectively. Given the transition from kindergarten to primary school (K3 to P1) and new academic year can be a blessing or a curse to young students, the instructor recruited students who completed K3 to P2 to build inner strength.

All enrolled participants and parents were invited for an "inter-view" that children could freely express and choose to join or quit. Meanwhile the instructor observed the parent-child interaction and communication as an early reference. During the program sessions, learners were engaged in various kinds of games, play, museums and park visit in the university, story reading and writing, mindfulness practices included pause with bell sound, slow down and count breathing, snack meditation, sit and be gentle when strong emotions arise etc. The instructor practiced loving speech and deep listening to reflect the feeling and state the true intention of the learners. The intimacy, trust and fun grew. Parents noticed how positively children framed their perceived difficulties with calmness, enjoy writing despite writing difficulties and willing to stop given ADHD features. Parents were willing to learn the tips and commit to practice. Planning, delivery, and tips of running the two programs will be shared.

#### **KEYWORDS**

Twice-Exceptionality, Early Intervention, Mindfulness, Parent-Child Enrichment

#### **OTW28**

# A Case Study on the Learning Experience of Inclusive Education for Twice Exceptional Students

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#### ABSTRACT:

This research mainly explores the learning experience of twice exceptional student in inclusive education. Participant is a six-year-old boy, identified as Asperger's syndrome with emotional disorder, and also has the problem of refusal to school. The participant has high concentration and logical thinking ability in the field of information scratch courses, maker clubs, and mathematical problem solving and won the micro bit racing problem-solving competition. Case study method was applied through semi-structured interviews and related data analyzing. Findings are as follows:

- The participant would stop all studies due to high frequency of refusal and emotional problems. He was unable to control his own emotional problems, and he did not know when the next conflict will occur, and he often hided in annoyance afterwards. However, he was good at reading and learning independently, and would be highly attentive to explore things of interest.
- 2. Parents tried their best to cooperate with the school's arrangements, actively participated in various educational meetings, and provided more assistance to the participant. However, because the elders who live with them dote on them, there was no consensus on the method of discipline, and it was difficult to correct emotional behavior problems.
- 3. In integrated environment, the teacher used positive class management model and job analysis teaching methods to achieve teaching goals. Interviews was made to introduce firmly details to the participant. When the participant was in good shape his was bored with all the classes. For example, in mathematics class, he was used to not listening to the teacher's lectures, and doing mathematics problem solving alone. The participant had strong learning ability, but due to lack of patience, emotional problems and refusal to study, the potential

characteristics of excellent talent were buried in the bottom. Based on the findings, the researcher offers some suggestions for future teaching and research.

#### **KEYWORDS**:

Twice Exceptional Student, Asperger's Syndrome, Inclusive Education

# OTW30 The Experiences of a Musically Talented Man with Autism Spectrum Disorder

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#### ABSTRACT

Based on a qualitative case study approach, this study explored the experiences of an adult with severe autism spectrum disorder who is musically talented. The participant in this study is a 35-year-old autistic man who is a professional musician. The findings showed the individual with discrepant strengths and weaknesses struggles in school. There were positive and negative effects of talents on the individual with autism, as well as implications for his future growth and adjustment as an adult. In this study, the role of exceptional education has to be discussed in identifying critical areas of need and providing important directions on how to meet the needs of individuals with musically talented autism.

#### **KEYWORDS**

Autism Spectrum Disorder, Musically Talented, Exceptional Education

#### **OTW54**

# The Linguistic performance of gifted students in solving semantic and syntactic problems

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#### ABSTRACT

When solving or processing linguistic problems, the brain process of gifted student was assumed distinctly different to typically- developed individuals. But till now, few research has been explored how the processing of gifted students deal with linguistic tasks. This study was aimed to find the differences in solving linguistic problems between 15 gifted students and 16 typically- developed students in elementary schools. After three types of semantic and syntactic error tasks were administrated, qualitative interviews were conducted with six randomly-selected gifted and typicallydeveloped students. the results of this study showed that there was even no significant difference in the scores of semantic and syntactic error tasks between those two groups, but with regards to processing linguistic problems from the qualitative interviews, gifted students had more diverse and concrete images in their minds; meanwhile, when judging the correctness of linguistic sentences, gifted students were able to explain the reasons more clearly. In conclusion, gifted students have multiple strategies in processing linguistic problems. Educators should understand their problem-solving strategies and characteristics, and also provide differentiated teaching to meet their needs and develop their potential.

#### **KEYWORD**

Semantic, Syntactic, Linguistic Tasks

#### OHK70

# Understanding Gifted Students' Self-assessment of Career Adaptability in Hong Kong: A Rasch Analysis of the Psychometric Properties of CAAS-SF

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#### ABSTRACT

Despite the official launch of formal career guidance and life planning (CGLP) education policy in Hong Kong since 2014/2015, there remains a lack of empirical studies that have explored gifted students' career-related gains from school-based CGLP. From a perspective of educational assessment, the purpose of this exploratory study was to examine gifted students' career adaptability that is composed of four dimensions based on previous research (curiosity, concern, control, and confidence, see Maggiori, Rossier, & Savickas, 2015). The Chinese version of CAAS-SF (Yang, Gao, & Sin, 2019) was used with 24 gifted students from nine secondary schools. Their age ranged from 14 to 20 (Mean age=16). By performing two steps of Rasch analysis through the R package TAM (Robitzsch et al., 2020), we found CAAS-SF has a high Rasch reliabilities for both the unidimensional model (EAP=.94) and four-dimensional model (EAP ranged from .89 to .94 for the four dimensions). One interesting finding is that model comparisons showed the unidimensional model indicating a general factor of career-adaptability fits the data slightly better (AIC=548.15, BIC=589.03) than the four-dimensional model (AIC=547.40, BIC=598.50). However, the multi-dimensional model provided more psychometric information of the four dimensions of CAAS-SF, which is consistent with previous evidence of this scale across countries. These detailed results are important to understand gifted students' self-assessment of curiosity,

concern, control and confidence in forming their career adaptability under the current career guidance and life planning education in Hong Kong. The person ability and item statistics of the two models will be introduced in our presentation. We will also discuss implications of the Rasch analysis results for the career guidance and counseling to support gifted students' overall career adaptabilities or these aspects that may need more attention based on the CAAS-SF.

#### **KEYWORDS**

Gifted Student, Career Adaptability, Rasch Analysis, Assessment

#### **OHK84**

#### Everybody can Shine: Assessment for Learning in Everyday Lessons

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#### ABSTRACT

Though assessment for learning (AfL) has been promoted for more than two decades, it may not be widely adopted in the classroom. One of the reasons is that assessment of learning (AoL) still dominates. Since schools are held accountable for helping students to meet standards, great importance is attached to students' learning outcomes. Despite tension between AfL and AoL, there is still a place for AfL in everyday lessons. In this essay, practical strategies to stretch students to fulfil their English Language potential will be discussed. By creating favourable conditions, recognizing students' strengths and providing constructive feedback, student involvement becomes more active during the learning process. This paves the way for striving for excellence.

#### **KEYWORDS**

Assessment for Learning, Feedback, Student Involvement, English Language Learning

#### **OUS148**

#### Talent Identification Program of Kentucky: Finding and Serving Talent

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#### ABSTRACT

Talent searches have been common in the United States for more than four decades. The nation was separated into regions with the Duke Talent Identification Program (TIP) serving the southern part of the U.S. In December 2020, Duke TIP ceased operations of the talent search, leaving a void for many states. To develop plans to continue serving these areas, several university faculty and staff members developed a consortium to collaborate on ways to move forward. This presentation discusses the the launch and future plans of the Talent Identification Program of Kentucky (TIP-KY) that was started through Western Kentucky University in 2021.

#### **KEYWORDS**

Talent Development, Talent Search

#### OCH105

# Construction and Verification of Discovery Model of Preschool Children's Superior Talents

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#### ABSTRACT

This study aims to seek for a multi-talent exploration model bases on the concept of talent development, to establish an evaluation system of preschool children's advantage and potential and to enrich the theory of preschool children's advantage talent discovery model in order to provide parents and teachers with simple and operable methods and experiences to identify children's potential from the practical level. The construction process of the whole excavation model includes preparation stage, identification stage and verification stage. The preparation stage is to ensure the reliability and effectiveness of observation and verification/recognition; the identification stage adopts the structural observation and verification/recognition model of teachers and parents; the verification phase, the validity of the model is verified by criterion-related validity and discriminant validity.

The subjects of this research were sampled from a public kindergarten in Zhanjiang City, Guangdong Province and a public kindergarten in Shenzhen. The research instruments included the Chinese version of "Multiple Intelligences Assessment Scale—A Form (CMIDAS-A)", the self-constructed "Preschool Children's Behavior Observation Scale" and the Chinese version of "The Gifted Rating Scale— Preschool Form (GRS-P)". Research data were analyzed by SPSS data processing and qualitative thematic analysis.

The results showed that first, for preschool children, it is considered that arts, language and mathematics are the most potential and cultivatable fields, while cognition and creativity were the most difficult ones to explore and cultivate; second, the talent recognition model of multiple observations and verification/recognition could effectively identify language, music, arts and social intelligences; third, creativity could significantly predict the development of other intelligences which could be used as a part of the talent recognition pattern in the future.

#### KEYWORDS

Pre-School Children, Concept of Talents, Superior Talents, Discovery Models, Multiple Observations 130

# OKO103 The Differences of Creativity and Self-concept between Gifted and Ordinary Children

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#### ABSTRACT

The purpose of this study is to identify the differences in creativity and self-concept between gifted and ordinary children. Creativity and self-concept are very important characteristics of giftedness. Creativity is the ability to produce something novel and appropriate and self-concept refers to the holistic perception an individual has of himself or herself. Therefore these two variables have to consider for the identification of giftedness. The participants of the study were 237 children who received the giftedness diagnosis test. The data were processed statistically through two independent group t-tests using the SPSS 25.0 program. The results are as follows: First, the creativity of gifted children was higher than ordinary children. In the sub-factors, though the language domain of creative ability showed a significant difference except for flexibility, no difference in the drawing domain. In addition, there was a significant difference between the two groups in creative personality. This indicates that gifted children have precocious language and divergent-logical thinking related to creativity compared to ordinary children. Second, there was no significant difference between gifted and ordinary children's self-concept, and the average gifted child's self-concept was lower than ordinary children. This indicates that excessive interest in gifted children can critically recognize their own characteristics. Third, the correlation between creativity and self-concept of gifted children was positively significant, but not high, and the correlation between creativity and self-concept of ordinary children was not significant. This is related to the results that there were differences in creative ability between gifted and ordinary children. The conclusion of this study is that, first, the importance of a multi-faceted evaluation using creativity and self-concept when identifying and discovering gifted children. Second, need for psychological care and support for positive affective development in infancy. Third, the consideration in developing a program for gifted children, methods to enhance the cognitive and affective self are necessary.

#### **KEYWORDS**

Creativity, Self-Concept, Gifted Children, Ordinary Children

# OTW144 Life Story of an Artistically Gifted Student with Asperger's Syndrome

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### ABSTRACT

The purpose of this qualitative research was to construct the ongoing life story of a twice-exceptional adolescent student (one art-talented student with Asperger's syndrome). By interviewing the student and his significant others, I tried to unfold the image of the twice-exceptional student and explore the impact of special educational labels in his daily life.

There were some findings from the life study of the twice-exceptional student with hidden disabilities. In his family, his parents had treated him with cruelty until they realized their child's special needs and started to. In school, he even felt some teachers looking down upon him, but once he was accepted, he would develop his advantages. In peer relationships, he would be worried if his peers noticed his disabilities. As for him, gradually he would build up confidence in his specialty and find his way to his future life.

The impact of the gifted and disabled labels was closely related to environmental and personal factors. People tended to overlook the special needs of gifted students with hidden disabilities. On the other hand, when the performance could not fit the expectations of the gifted side, people would be confused and amazed. Only when the students were accepted as twice-exceptional students, they would make significant process on self-development, and therefore fully understanding from others might appear.

#### **KEYWORDS**

Artistically Gifted and Talented Student, Gifted Student with Asperger's Syndrome, Twice-Exceptional, Asperger Syndrome, Qualitative Research Methods.

#### **OTW68**

# Observation and Reflection Sharing of Two Twice-Exceptional Gifted High School Students Cooperating with Each other in Participatory Budgeting Initiatives

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#### ABSTRACT

Participatory budgeting plays a very important role in the era of representative politics, civil society, and the popularization of Internet information. It not only promotes the deepening of democracy, but also enables more balance and distribution of power and resources. Many cities, including Amsterdam, the Netherlands, provide planning support and support with a relatively complete political system. In Taiwan, the Taipei City Government has continued to promote the participatory budgeting system since 2015, and encouraged Taipei citizens in a broad sense to solve local problems through advocacy on issues of public interest. Through the author's field work in the high school, the author counsels, observes and records twice-exceptionally gifted students with emotional disorders and multiple physical disabilities, and understands their advocacy and self-advocacy process for barrier-free improvement such as arcades and roads around the campus. How to transcend their own limitations, face challenges, cooperate with each other, and make a big leap forward. Through in-depth interviews and reflective discussions with two students, this study examined their views on participating in civic initiatives and self-advocacy.

#### **KEYWORDS**

Participatory Budgeting, Twice-Exceptionally Gifted Students, Emotional Disorders, Multiple Physical Disabilities, Issues of Public Interest, Self-Advocacy

#### **OTW134**

# Learning Behaviors of Elementary Students with Special Needs in Outdoor Environmental Activities

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#### ABSTRACT

**Objective:** Students who are first identified with specific learning or attention deficits or social and emotional abilities can also have extraordinary gifts and talents.(Baum & Owen,2004;Foley Nicpon et al., 2011; Trail,2010;Reis, Baum, & Burke,2014) Nicopn, Allmon, Sieck & Stinson(2011) found that gifted/ADHD and ADHD boys showed a preference for learning science, social studies, space, and science fiction; had a desire to work with others; reported enjoying free reading more than gifted boys.

**Method:** In this study, a qualitative design was employed to understand the learning performance of five students with special needs, who possess giftedness but failed to pass gifted identification. The students were placed in six outdoor environmental activities and the study was carried out by participant observation and the collection of multiple assessment data. For data processing and analysis, the researchers first reexamined and organized data from observation records and then used coding to analyze, compare, contrast, revise, and summarize the compiled data. The results revealed the learning performance of the study participants in outdoor environment activities in terms of "environmental information reception," "process skills presentation," and "social awareness."

**Conclusion:** Through observation, the result showed that participating students with attention-deficit/hyperactivity disorder(ADHD), and height functioning students on the autism spectrum disorder(ASD)- learning behavior in outdoor environment activities was affected by their characteristics. Gifted and special children also have special needs, they must participate as fully as possible in all science activities in the classroom. Teachers develop different teaching styles in response to their special needs so that the curriculum can easily affect them. The results of this study may

serve as a reference for teachers to support students' strengths and improve their weaknesses.

#### **KEYWORDS**

Twice-Exceptional Children, Outdoor Environment Activities, Learning Behaviors, Environmental Information Reception and Attention, Process Skills, Social Awareness

#### OBA12

# Teachers' Attitude towards the Gifted and Talented Students in Inclusive Classroom Settings

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#### ABSTRACT

Gifted children have naturally possessed extraordinary intellectual abilities. Identifying and developing them is a challenging task for the teachers. Teachers' role is crucial in the learning and education of gifted children. Besides training, skills, experience and expertise, teachers need to have certain attitudes towards gifted children. The present research aims at finding and analyzing (a) teachers' attitude towards various instructional approaches for differentiating curriculum and instruction for gifted students in mixed ability classrooms (b) the confidence level of the teachers towards identifying the needs of gifted students in academically diverse classrooms (c) preferences of instructional strategies teachers use to meet the needs of gifted students in academically diverse classrooms and (d) the perceptional differences regarding gifted education between teachers. The researcher surveyed some private and government schools from the Kingdom of Bahrain. Four hundred and ten teachers participated in the survey. The study's findings were analyzed quantitatively using t-test, df, sig. values. Findings stated that teachers' positive approach, competence, and ways of perceiving gifted children impact the children's overall growth. Teachers indicated a high level of confidence in their ability to adopt a lesson. However, a significant level of disagreement was found in several parameters. The teacher with a positive approach plays the role of a mentor and motivator. He/she uses strategies to make the learning process challenging and engaging for gifted students. Suggestions were made for teacher training and further research.

#### **KEYWORDS**

Gifted Children, Teacher Attitude and Perceptions, Gifted Education, Inclusive Classrooms, Differentiation

# OCH18 Narrative and Identity Analysis of a Gifted Student's Story

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#### ABSTRACT

Gifted adolescents are in a pivotal time in which they are actively "trying on" identities. Through the small stories research in narrative analysis (Bamberg & Georgakopoulou, 2008), this study aims at how a gifted student constructed stories and her identity construction when facing perceived educational setbacks. The participant is a fifteen-year-old female Chinese student who is talented in mathematics and is considered as a representative sample of gifted students for initiating her own tasks, creative problem solving, extending learning beyond class assignments, and thinking abstractly. One bilingual excerpt with paralinguistic features was drawn from conversational data to analyze how this gifted student dramatically constructed the ordinary conflict and how she portrayed the math teacher as well as her classmates to conduct her identity management. This study attempts to answer the following research questions: How does the gifted student construct stories and how does the student view her student identity concerning dominant ideologies? By scrutinizing the student's inconsistencies, contradictory positions, and constant maneuvering between different versions of selfhood, the study revealed the student dramatically exaggerated the trivial things and exhibited a sense of egocentrism in adolescents. It was also shown that ambivalence was manipulated towards being recognized by classmates and distinguished from them, which may be impacted by Confucianism, puberty, and class structure. It was suggested that gifted students' doing self is not all that they tell, thus teachers should consider gifted students' needs between the lines instead of interpreting their stories at a rhetorical level. Moreover, communicating equally with the gifted and teaching them to empathize with others are considered crucial for them to resolve their ambivalence.

#### **KEYWORDS**

Gifted Student, Adolescent, Narrative Analysis, Small Stories, Identity

#### OTK141

# Multimodal Viewings of Pre-Service Mathematics Teachers about Gifts and Talents

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#### ABSTRACT

Teachers' conceptions and knowledge about gifted and talented students are crucial for both identification and provision of gifted/talented students studying in regular classrooms. In this respect, teachers' knowledge and conception of gifted and talented students affect both the identification within subjective methods and the effectiveness of teaching strategies for addressing the special educational needs of these students in the classroom. Regarding the description, there is confusion in the views between gift and talent. Within this background, this study aims to explore the conceptions and views of pre-service mathematics teachers about being gifted and talented. To fulfil this aim, a descriptive research method is used, and 36 senior pre-service mathematics teachers joined the study. To get a full extent of the views and conceptions, participants were asked to design multimodal texts to demonstrate their understandings/conceptions about being gifted and being talented. Each participant designed one multimodal text for being gifted and one multimodal text for being talented. The multimodal design enabled participants to demonstrate their views and conceptions using various design tools and semiotic resources within language mode, visual imagery mode, and mathematical mode. 72 multimodal texts were obtained and were analysed through multimodal discourse analysis. Results demonstrate that participants generally attributed giftedness to cognitive abilities which are related to inner capabilities to perform mathematics or science. Next, being talented is mostly depicted as being able to perform any art or sport. What is more, it is found that a high number of participants have limited knowledge about gifts and talent. The research concludes that in pre-service teacher education, there should be comprehensive instruction about the description of gifts and talents.

Key words: Gifts, Talents, Description, Mathematics Teachers

#### **OTK149**

# Investigation of Gifted Students' Academic Performance in Statistics Tasks Related to Real Covid-19 Pandemic Data

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#### ABSTRACT

Statistics appear in many places in our daily life. The skills to work with such information became more important in a society when the newspapers and news are examined. It is shown that statistics is integrated with many aspects of our lives (Çakıroğlu, 1994). Especially during the Covid-19 pandemic process, statistical concepts appear more frequently. Therefore, using Covid-19 data in statistics teaching makes teaching statistics more effective (Singer & Willett, 1990). Giftedness is a domain-specific phenomenon that occurs under favorable conditions (Renzulli, 2002). As a specific type of gifted student, mathematically gifted students are flexible and creative in problem-solving strategies, expressing problems in mathematical ways, generalizing math patterns, and math skills, and can be proficient in mathematics (Krutetskii, 1976). It is debatable whether gifted students' mathematics ability will include their statistical ability (Garfield & Chance, 2000; Durak & Aslan-Tutak, 2019). It is important to examine the performance of gifted students who have high-level thinking skills in statistical tasks. Additionally, there is no study on statistical tasks with gifted students examining the processes of making statistics. The research problem is how the gifted students' academic performance in statistics tasks related to real Covid-19 pandemic data. The current study employed the case study design, one of the qualitative research methods. The case study allows in-depth investigation of the target problem (Cresswell, 2013). The current study's participants are twenty-eight middle school gifted students attending a BILSEM (Center of Science and Art) in Ankara, Turkey. A data collection tool consisting of 12 open-ended questions was prepared by researchers. Twenty-eight students participated in the interviews. The themes were formed and analyzed from the data obtained.

Gifted students perform better academically than their peers and have higher-order thinking skills (Clark, 2013). For this reason, we think that they can carry out statistical processes more accurately than their peers by using real Covid 19 pandemic data. We think that they will use graphical representations effectively and

use various strategies to organize large numbers of data to solve problems. The findings of the study will be shared during the presentation.

#### **KEYWORDS**

Gifted Students, Statistics Education, Academic Performance, Real Data, Covid-19

#### **OIR116**

# Effects of the Raising a Thinking Child Program on Parental Self-Efficacy and Problem Solving of Parents of Gifted Children

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#### ABSTRACT

Gifted children usually have special needs that require attention from their parents, and a lack of efficient parenting strategies may contribute to social and emotional problems in such children. To date, research on parenting strategies is still scarce. Research Objective: The study focused on evaluating the effectiveness of Raising a Thinking Child Program on parenting self-efficacy and problem solving. Method: This is a semi-experimental research single group with pretest - posttest. For this purpose, the parents of children aged 4 to 7 years old participated in the Raising a Thinking Child Program workshops for nine 2-hours group sessions providing opportunities for parents to learn: not to tell their children what to think, but to help them develop ICPS skills that enable them to think through problems for themselves. ICPS encourages parents to develop children's understandings of problem solving concepts through different kinds of word play. Hepner-Petersen Problem-Solving Questionnaire and Parental Self-Efficacy Questionnaire were used to collect the data. Data were analyzed by t-test in order to test the significance of differences in scores of pre and posttests. Results: The findings showed that teaching Thinking Child Program could significantly improve problem solving skills and self-efficacy of mothers. Conclusion: Teaching parenting strategies properly can increase problemsolving skills level and self-efficacy of mothers that may indirectly contribute positively to gifted children's behavioral adaptation at home and school.

#### **KEYWORDS**

Self-Efficacy, Problem Solving, Parenting, Gifted Children

#### OAU95

# What is VHAP? How does the programme embrace diversity and nurture the blooming of gifted and talented students?

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#### ABSTRACT

Virtual School Victoria facilitates the Victorian High Ability Program (VHAP). VHAP offers high-ability students in Years 5 to 8 at Victorian government schools the opportunity to participate in 10-week extension and enrichment programs, in English and Mathematics. The programs are delivered virtually but in real time. They focus on tasks that stimulate students' critical thinking, problem solving and creativity - enriching their understanding and skills. Working collaboratively, the diverse VHAP staff team have established a virtual learning community for both staff and students.

This is the first government initiative in Australia to provide a systemic approach to catering for high ability students through a withdrawal program. Focussing on equity, the program was designed to reach and meet the needs of high ability students throughout the state of Victoria. Our diverse student cohort is selected from metropolitan, regional and small rural schools in remote areas from across the state. There is a diversity of students in terms of cultural background, socio economic status and access to other extension opportunities.

In addition to weekly lessons, participating students can access extension tasks through our online Learning Management System. Schools are encouraged to then offer master classes, working collaboratively with neighbouring schools. The program's intention is to connect and up-skill teachers of high ability students, provide social interaction for students, and offer inspiring academic extension.

This presentation will focus on the design and implementation of a program which aims to meet the needs of high ability students in a diverse and large geographical area.

#### **KEYWORDS**

Extension, Enrichment, Critical Thinking, Creativity, Equity, Opportunities.

#### OAU117 Empowering parents

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#### ABSTRACT

The key purpose of Victorian Association for Gifted and Talented Children (VAGTC) is advocacy for gifted and talented students in Victoria through involvement with both educators and parents. A current, exciting program is the support of parents as they delight in the challenge of parenting gifted children. DET (Department of Education and Training, Victoria) financially supports VAGTC to develop online seminars for parents. Further support is available via an email consultancy service staffed by expert volunteers. This has coincided with extensive funding to government schools through the Student Excellence Program. Their goal is to enhance the learning environment and build teacher capability to support and extend high-ability students.

In this presentation, we will discuss questions and issues that have been uppermost in parents' minds and how we tailor seminars to their needs and interests. Parents provide feedback following each seminar indicating which topics have been most helpful to them. They are also invited to ask questions prior to a presentation and suggest new topics following their involvement. Each seminar allows a Q&A session where parents provide further feedback regarding their needs. Data is collated and informs the development of future offerings.

Recent topics include:

- School based provisions
- Supporting gifted children during transitions
- Supporting social and emotional needs of gifted children
- Developing Individual learning plans.
- Developing a gifted child's portfolio

Moving to online provision has aided our support of remote families who have previously found access to advice difficult. Interest has extended to interstate and international participants indicating similar need in other regions.

Responses from parents have been overwhelmingly positive. For many, the opportunity to share and be heard is key. For others, information about best practice in gifted education is helpful as they advocate and develop positive partnerships with schools. Overall, parents are empowered.

#### **KEYWORDS**

Parents, Online, Frequently Asked Questions, Advocacy, ILPs, Gifted, Differentiation, Parenting, Seminars, Consultations

#### **OTK74**

# The Awareness and Knowledge of Classroom Teachers and Counselors on Twice-Exceptionality in Turkey

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#### ABSTRACT

Classroom teachers and counselors have a key position in the process of identifying individuals with special needs in Turkey. Although the number of studies on "twice-exceptionality" has increased recently, it is seen that studies on teachers' awareness and knowledge about students who are twice exceptional are limited. Therefore, the aim of the current study is to reveal the awareness and knowledge levels of teachers about twice-exceptional students. Classroom teachers and counselors will be the participants of the study. Participants will be asked to describe the concept of twice-exceptional students. Researchers aim to reach approximately 200 participants in the current study. The questionnaire (in a paper and pencil form), prepared by the researchers will include demographic information about the participants and questions on twice exceptionality. After analyzing the data, researchers intend to share the findings with the congress participants.

#### **KEYWORDS**

Gifted, Twice-Exceptional, Teachers, Counselors

#### **OAU87**

### Strength-Based Approaches for Supporting Twice-Exceptional Learners: A Systematic Literature Review

#### Dr Michelle Ronksley-Pavia<sup>1\*</sup>, Dr Janis Hanley<sup>2</sup>

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#### ABSTRACT

In Australia approximately 7% of school children are considered twice exceptional; these learners possess combinations of both disabilities and giftedness. In many countries, including Australia, they remain under researched and underserved. Researchers argue that strength-based approaches, based on positive psychology can support the unique learning needs of these students. This research indicates the value of strength-based approaches in promoting academic, social and emotional progress, and potentially, addressing underachievement and disengagement for twice-exceptional learners. In contrast to deficit approaches, centring on perceptions of dis/ability, strength-based methods build twice-exceptional learners' capabilities. Focusing on, and amplifying strengths enables both student engagement and talent development, empowering the students in their learning. While strength-based learning offers new ways to support this disadvantaged population of high potential learners, its application in classrooms is constrained by limited knowledge regarding the ways these approaches can be translated into 'real world' action.

This presentation outlines findings from a systematic review of empirical literature about strength-based practices and the ways this has been explained and translated into practice. Furthermore, this presentation explores potential impact of these approaches on improving twice-exceptional student engagement and achievement. In all, 62 research articles were uncovered and analysed by categories including country of study, research methodology, point of view, participants and findings. In this session, the presenters will summarise their findings and outline practices centred on strength-based, talent focused approaches to enabling and supporting the learning of twice-exceptional learners in reaching their potential.

#### **KEYWORDS**

Twice-Exceptional, Strength-Based, Gifted, Twice-Exceptionality, Talent Development, 145

#### **OTK71**

### Investigating the Metaphorical Perceptions of Pre-school and Classroom Teacher Candidates Toward Twice-Exceptionality

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#### ABSTRACT

The aim of this research is to reveal the metaphorical perceptions of teacher candidates towards twice exceptional students. Phenomenology, one of the qualitative research designs, will be used in the research. The study group of the research will consist of students studying in pre-school teaching and classroom teaching programs at Uşak University in the 2021-2022 academic year. Teacher candidates will be asked to create a metaphor by completing the sentence "Twice exceptionality is like ....... because ......". The obtained data will be analyzed by content analysis method and reported. The research results will be discussed with the literature.

#### **KEYWORDS**

Twice Exceptional, Metaphorical Perceptions, Teacher Candidates

#### **OTK123**

## The Effects of Concrete-Representational- Abstract Interventions on the Acquisition of Multiplication Facts for Twice Exceptional Student

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#### ABSTRACT

A heterogeneous group of gifted students with learning disabilities (LD) constitutes a part of twice-exceptional students (Buică-Belciu & Popovici, 2014). Even though the exact number of twice-exceptional individuals (2e) is not certain, it is estimated that 6 percent of the approximately 7.5 million individuals with disabilities served under the IDEA are twice exceptional (National Education Association [NEA], 2006). Maddocks (2020) conducted a study for identifying twice-exceptional students revealed that gifted children with LD suffered from processing problems such as short-term working memory, auditory processing, long-term working memory, retrieval, and processing speed. Processing speed is the most common processing deficit, and it is related to mathematics calculation (Niileksela et al., 2016). Since many gifted children with LD have trouble in mathematical calculations, it is highly important to provide them with appropriate mathematics education. NEA (2006) indicated that teachers' responsibilities for twice-exceptional students' instruction. They should enable students to learn by using hands-on activities and supply them with direct instruction regarding their inadequateness. Concrete-Representation-Abstract (CRA) is an evidence-based strategy used in teaching basic arithmetic operations to students with LD and its effectiveness demonstrated in many studies (Bouck et al., 2018). CRA strategy offers the necessary mathematics education to 2e students. In the current study, we used single-subject research methodology to improve the basic multiplication skills of a potentially twice-exceptional student (gifted with LD) by enhancing conceptual and procedural understanding. Each stage (concrete-representational-abstract) included respectively demonstrating, guiding and independent practice. At the end of each session, the student solved 10 multiplication facts and the percent of accuracy was calculated. After the student met the criteria (80% accuracy) three times, he passed to the next stage. His baseline, intervention, and maintenance performance were graphically demonstrated, and visual analysis was used. Visual analysis demonstrated that although his baseline level was 0%, the accuracy percentage increased in concrete, representation and abstract sessions and he accomplished each phase in approximately six sessions. Moreover, ten days and twenty days after the end of the instruction, he maintained his performance calculating at least 8 multiplication facts correctly. Although the results of current study are consistent with the other CRA research findings in terms of increasing conceptual and procedural understanding in multiplication skills, this research is different from previous studies in which that the participant is potentially twice-exceptional.

#### **KEYWORDS**

Twice Exceptional, Mathematics, Multiplication, CRA, Single Subject

#### OTK114

# From Past to Present Gifted Education Research on Science and Art Centers: A Systematic Review

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#### ABSTRACT

Science and Art Centers (SAC) are most common talent search and after-school programs for gifted students In Turkey. There is at least one SAC in every city and there are more than 300 SACs. Every year, nominated students have identification processes and after a two level (first one is a group testing and the second one is individual IQ test) identification procedure. SAC, which has been used as a talent research program since 1996, has been the subject of many studies. The aim of the study is to present a systematic review of studies related to SACs conducted in 21th century. For this purpose, we searched "science and art center" (bilim ve sanat merkezi), SAC (Bilsem) as keywords in ProQuest, Google Scholar, TR Index, National Theses Databases. We found about 900 studies. These studies will be analyzed according to number of authors, research type, research language, research method, research sample, year etc. After the data analysis is completed, the findings will be shared with the conference participants. It is expected that research findings will contribute to the studies and policies about the SACs in Turkey.

#### **KEYWORDS**

Science and Art Center, Review, Gifted, Talent Search

## OTW136 Models of Identification for the Arts-Talented in Taiwan

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#### ABSTRACT

Arts education means cultivating talent, enhancing the understanding of the public regarding the arts, and strengthening their sense of aesthetics and creativity which consists of music, visual arts, dance, and theater arts in Taiwan. Among them, the professional arts education aims to cultivate theories, skills, and creativity of those arts-talented students identified in public schools (Ministry of Education, 1997 & 2015). The government establishes specialized programs for arts-talented students in elementary, junior, and senior high schools where they receive guidance on the suitable development of their artistic knowledge, performance/exhibition, and appreciation abilities including cultural, aesthetic, creative, and critical thinking (Wu, 2019).

The identification of artistic talents is critical to the promotion of talents and professional basic education. The first step toward success is to recruit students with artistic talents to enter the programs. According to research studies, predicting one' s future performance has complicated and interactive factors but not only based on the potential of artistic ability. Aside from the technical execution and physiological condition of a student, the psychological characteristics are also decisive for the cultivation of elites (Abbott & Collins, 2004; Macnamara & Collins, 2008). All levels of artistic specialized programs are used to provide art tests, like auditions in music, for identifying students' talent in arts, and researchers propose to provide multi-model for identification.

Researchers utilize Delphi Technique to collect and analyze data with twelve experts from arts-talented schools. Results are finalized after three-round focus group interviews and questionnaires. Four models of identification are recommended, such as the Test model, Observation model, Interview model, and Portfolio model while each model may have one to two modes (Table 1).

Researchers will recommend the central and local governments consider multi-model

identification for arts specialized programs at all levels according to research findings. A pilot study on the application and effectiveness of multi-model identification, taking the example of the music-talented, is suggested for future studies.

Models	Modes
Test	Potential/Aptitude Test
	Audition/Ability Test
Observation	Behavioral Checklist
	In-Class Observation
Interview	Group/One-on-one
Portfolio	Competition
	Regular Performance

Table 1Models of Identification in arts-talented

#### **KEYWORDS**

Identification, Arts-talented, Specialized Program for Arts-talented

#### **OTK79**

### Investigation of Perfectionism, Psychological Resilience and Self-Compassion Levels of Turkish Gifted Students

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#### ABSTRACT

The aim of this study is to determine the perfectionism, psychological resilience and self-compassion levels of gifted students and to examine the relationships among them. The research will be carried out with gifted students at secondary school level attending the Science and Art Center. Demographic information form and three measurement tools (Child and Adolescent Perfectionism Scale, Short Form of Self Compassion Questionnaire, Child and Youth Resilience Measure) will be applied to the students. After data analysis, results will be shared with the congress participants.

#### **KEYWORDS**

Gifted, Perfectionism, Self-Compassion, Psychological Resilience

#### OTK121

#### Giftedness and Eye Tracking: A Systematic Literature Review

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#### ABSTRACT

The eye-tracking technique is a research method that tracks eye movements in realtime and investigates what the research participants see and how see it (Andrew, 2007; Duchowski, 2007; Holmqvist et al., 2011). This technique can be used to scientifically and objectively identify both conscious and unconscious eye movements and can analyze the habituated behavior of the research participants. Due to these advantages, it has been recently used in various fields such as marketing and education research. We aimed to systematically review giftedness studies that were conducted with eye tracking techniques. The eye-tracking technique is new for gifted education area. Eye-tracking technologies can be used in schools with different disciplines including reading, writing, mathematics, and visual basics with different groups of students. Especially in the last 10 years, the number of eye tracking studies conducted with special need groups in special education including studies with learning disabilities, autism spectrum disorder (Strohmaier, 2021) and gifted students (Sajka & Rosiek, 2015; Schindler et al., 2016) has increased. We selected 15 empirical studies that were published between 2012 and 2021 based on the inclusion criteria. Once we analyzed the studies, we reached four themes including problem-solving strategies, attention span, time of solution, and fixation duration concepts. We observed that researchers usually use standard tests and nonstandard tests to evaluate the eye tracking activities. The analysis revealed that the studies are changeable according to analysis and design. Future researchers should consider conducting more experimental and quasi-experimental studies.

#### **KEYWORDS**:

Giftedness, Eye-Tracking, Gaze-Pattern, Review

#### OID88

# Mental Health of Talented Students and their Peers from Villages, Towns, and Cities in India during Covid-19 Pandemic

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#### ABSTRACT

The Covid-19 pandemic has affected students worldwide with India being no exception. The psychological health of millions of students has been affected due to uncertain learning environments and disruption in scholastic advancements, examinations, internships, jobs placement, and life as a whole. Due to their unique socio-emotional and psychological characteristics, students with gifts and talents are likely to have experienced the Covid-19 pandemic differently from their peers. The present study investigated the prevalence of depression, anxiety, and stress during the second wave of the COVID-19 pandemic in India and investigated the effects of the pandemic on such students based on whether they were living in villages, towns, or cities. The sample included 1020 participants (603 males and 417 females) with 470 identified talented students (ITS) and 550 non-identified students (NiS). MANOVA and ordinal logistic regression analysis were carried out for understanding the differences between the various subcategories and the probability of having high negative emotional states among these groups. Results indicate that unidentified students show higher scores for depression, anxiety, and stress than their talented counterparts and throw light on some interesting dissimilarities between students from different locales. Results provide new insights that help in developing psychological support systems for students from different categories.

#### **KEYWORDS**

Covid-19, Mental Health, Talented, Locales, Comparison

## OAR102 Gender Differences in Personality Traits of Gifted Adolescents

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#### ABSTRACT

Present research aims to analyze the gender differences in gifted adolescents in the context of personal traits in Yerevan, Armenia. The initial sample consisted of 500 high school students aged 16-18. In the course of study 35 of 500 participants were defined as gifted. To reveal psychological identity of the participants the Big Five personality test was applied. Gifted female adolescents show neuroticism manifested through anxiety, self-consciousness, vulnerability and depression. Gifted males display self-consciousness and vulnerability. The results, particularly neurotic tendencies among both genders, are in line with the research conducted in other countries.

Methods and Materials: Renzulli's Three-Ring Conception of Giftedness was used to reveal gifted adolescents. According to the former, gifted behaviour is formed of and manifested through three essential components: above average ability, creativity and task commitment. The following instruments were used to measure all the three components: Cattel's Culture Fair Intelligence Test for cognitive abilities (selected defining IQ score being between 130 and 145); Picture Construction Task from Torrance Tests of Creative Thinking; Academic motivation questionnaire for high school students by M.I. Lukyanova and N.V. Kalinina. The quasi-experimental design has been used with 35 participants in the comparison and experiment group each (total sample size: 70 adolescents). The experiment group consisted of 14 females and 21 males, whereas the comparison group included 24 females and 11 male participants. Independent T-Test, with p < .05, using SPSS 22 was conducted for the comparative analyses.

#### **KEYWORDS**

Gender Differences, Gifted Adolescents, Personality Traits, Neuroticism

#### OTW06 Experience Sharing on the Implementation of the Cope and Grow Model Through ODYLP for Music Talented High School Students

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#### ABSTRACT

The purpose of this study is to investigate the implementation effect of the project "On Demand Youth Leadership Program" (ODYLP), based on the Cope and Grow Model for musically talented high school students. The Satisfaction Questionnaire for participants was conducted among 16 students and 4 teachers through email. This Questionnaire was divided into two parts, a satisfaction survey and open-ended questions. The findings demonstrated that students and teachers were extremely satisfied with all project activities and courses of this program, including attending some lectures different from the classic and masterclasses, participating in the volunteer activity, engaging in leadership workshops, and planning and implementing follow-up projects in Taiwan. In the second part, the open-ended question feedback from students illustrated that they widened their perception of the world, and fuelled their eternal desire for music through this program. Furthermore, they described that after participating in this whole program, they not only experienced the power of music for helping and influencing people but also deeply understood the importance of interpersonal relationships and leadership and the value of life.

#### **KEYWORDS**

Cope and Grow Model, Leadership, Musically talented student

#### OTW150

### The Influence of Self-perception and Family Support on School Adaptation of Math/science Gifted Senior High School Student with Autism Spectrum Disorder

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#### ABSTRACT

Although there is a growing body of research regarding Autism Spectrum Disorder, very limited research is being conducted on students that have Autism Spectrum Disorder and are also gifted. Research, identification, and programming for the twiceexceptional student identified with Autism Spectrum Disorder and also exhibiting gifted are sparse in the professional literature in the fields of special and gifted education. This research examined how self-awareness and family dynamics supported a high school second-year gifted student with mild autism spectrum disorder to adjust to school life. Rigid personality or narrow interests in autism may lead to poor learning adaptation or interpersonal conflict. However, such students, if they can discover their interests, should be able to combine them with strengths to provide the school as a starting point for counseling interventions. Therefore, this research adopted a qualitative research orientation, through the case's self-narrative, to understand the case's feelings and phenomenon interpretation during the process. The findings of the research were as follows: the case could understand their own physical and mental development and interpersonal conflict, think about their strengths, uniqueness, and special needs, and then communicate with his mother, teachers, and school to form a consensus, thus promoting the formation of a positive support system, and finally reaching self-identification, family support, and school adjustment went well. In this process, the mother gave the case simple and clear words, so that he understood the meaning of learning and the norms of school life, and the mother demonstrated how to achieve the steps required by the teacher. In the collaborative learning process, the teacher planned appropriate opportunities to integrate them naturally into various learning tasks to strengthen their peer acceptance and interpersonal relationships. In addition, the teacher took advantage of the situation and assigned the tasks of scientific experiment design with the unique advantages of students. Various units of the school also communicated and

cooperated closely to show empathy to support the student, so that he adjusted to self-deprecation, defensiveness, and anxiety to gain a full sense of security. Research suggestion: Teachers and parents can guide children to learn self-awareness so that they can feel positive support in the process of advantage development.

#### **KEYWORDS**

Self-Perception, Family Support, School Adaptation, Autism Spectrum Disorder

#### **OTW36**

## Discovering the Highlights of Children—A Case Study of a Mother Raising a Twice-Exceptional Child

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#### ABSTRACT

Whitmore and Maker believe that for successful adults with disabilities, their most significant support comes from their family, especially their parents (quoted from Wu Kun-shou, 1999). The purpose of this study is to explore the parenting experience of a mother raising a twice-exceptional child. The dilemma faced by the mother in raising her child with twice-exceptionality was studied and how the mother coped with the challenges was addressed. The research method adopted in the study is a qualitative research in the form of a case study. Semi-structured interviews were conducted to gather information. Content analysis was used to analyze data. The mother went through three stages in the process of raising her twice-exceptional child. She was worried when she first became a mother. Then she felt happy, sometimes helpless. She also felt reassured, surprised, angry and even anxious in the ups and downs of life. The mother's emotion has eventually been adjusted to be stable and positive. In addition, the mother raising a twice-exceptional child experienced the stages of grief-escape, helplessness or letting go, seeking distraction, criticizing or angering others and expressing emotions and seeking distraction, seeking support, thinking positively or accepting it. The parenting dilemma and coping strategies were as follows:

1. Parenting dilemma:

(1) Unable to identify the child's real obstacles, difficult to see the child's strengths.

(2) Teachers failing to understand the dual characteristics and difficulties of a child.

(3) Constantly dealing with a child's emotional and learning challenges causes exhaustion.

2. Coping strategies:

(1) Actively seek external resources to develop children's advantageous ability.

(2) Understand the dual characteristics of children, encourage and accompany the children during their growth.

(3) Express emotions through conversations and take care of herself through

psychological counseling.

Based on the results of the study, the researcher discussed and put forward specific suggestions for parents, teachers as follows:

1. Parents should be consistent in parenting and develop their children's advantages.

2. Teachers need to understand the characteristics of students and create a friendly environment.

3. Schools should strengthen parenting effectiveness and provide students with adequate resources.

### **KEYWORDS**

Parenting Dilemma, Coping Strategies, Adjustment Process

## OTW47 Make Me Whole: Maternal Support in the Life of Pianist with Autism

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#### ABSTRACT

The purpose of this study is to investigate the significance of maternal support in the talent development of autistic pianist. Due to lacking of cognitive, social and verbal skills, autistic pianists are hindered to excel as professional musicians. Based on the well-known stories of autistic pianists, mothers seemed to play a very significant role in the talent development of the autistic pianists. However, studies regarding to the maternal support are very few.

In this study, a multiple-case study was implemented, with three mothers of autistic pianists being invited to participate in this study. The pianists are Ace, Ben and Cain who attained awards in international level piano competition for special needs. Ace's mother and Cain's mother are housewives, while Ben's mother is a music educator. The data were collected through semi-structure interview, related documents and researcher's notes. Data were analyzed qualitatively by thematic analysis.

The results of the study indicated that three mothers played critical role in helping autistic planists in deciding, training and managing the musical talent development. The early stage of talent development shows mothers' persistence in helping children who barely understanding instruction to engage in plano lesson. During middle stage, the mothers supervised the planists in music interpretation and training their performing etiquette for performance preparation. In the later stage, the planists were insufficient in communication and managing skills for the musical profession, thus mothers scouted them for on-stage chances and managed performing miscellaneous to support the planists to fulfill the professional requirements.

It was also found that the mothers' supports were different regarding to the goals setting for the pianist and the efforts to engage them in talent development. Ace's mother expected that his son could secure his job as a pianist and thus proactively promoted his son through competition, blog and social networking. As an educator, Ben's mother expected to discover Ben's ability and at the same time propagated autism awareness through organized concerts and talks. She even established the Autism Music Association for arranging autistic instrumentalists' performances. Cain's mother expected Cain to refine his piano skills, thus she supported Cain in further study in master program and taking part in various open competitions.

In conclusion, the mothers played as a complement role of a professional pianist to support autistic pianists to become a competent musician and in the same time transformed their own life. Suggestions for educators and parents in supporting musical talent development of autistic pianists are provided based on the findings.

#### **KEYWORDS**

Autistic Pianist, Parenting, Talent Development, Maternal Support

#### **KEYWORDS**

Autistic Pianist, Parenting, Talent Development, Maternal support

#### OTW162

# Angel of Rare Disease – Life Story on the Talent Development of a Twice Exceptional Student

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#### ABSTRACT

Due to physical or psychological defects, lowness, or obstacles, people with disabilities have long been concerned and assisted, while ignoring the display of gifted or special talents, especially for twice exceptional students who are more likely to fail to discover their superior talents as soon as possible. This study adopts qualitative research method to explore the learning and growth process of a student with severe multiple disabilities who suffer from mitochondrial deficiency and cerebellar atrophy. To learn about students' life stories of how to face difficulties and never give up her special artistic talents under the physical and mental obstacles caused by rare diseases. Participants are twice exceptional student, her mother and 3 teachers. Data collection includes interviews, documents, works, videos, etc. Findings are as follows:

1. The development of special talents requires early observation by teachers and parents to cultivate their superior abilities. Interest and talent acquisition are definitely the driving force for sustainable development.

2. Key factors in the development of special talents including:

(1) In personal aspect, courage to face and accept personal obstacles, emotional stability and strong will, a stage that provides a sense of achievement are the main reasons for student success.

(2) In family aspect, parents continue to grow themselves and help their children develop, parents are highly supportive of their children's special talents are important for their child to blooming.

(3) In school aspect, teachers need to understand the needs of twice exceptional students and offer to assist, provide appropriate courses and teaching for students with special talents are key factors in the realization of students' potential.
Based on the findings, the researchers put forward suggestions for twice exceptional students and their parents, schools and related practical staff for reference.

#### **KEYWORDS**

Twice Exceptional Student, Artistic Talent, Qualitative Research Method

#### OIN29

## The Relationship of Self-compassion and Emotional Well-being in Academically High Ability Students

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#### ABSTRACT

High ability students have their own advantages from other students in general. They have superior cognitive abilities, have high learning motivation, good academic perception and perfectionists. The uncertain conditions during the COVID-19 pandemic have the potential to make academically high ability students experience discomfort, especially when their plans don't go as expected. This has an impact on the emergence of negative emotional responses such as anger, disappointment, and self-blame, especially when unable to achieve the goals that have been set. Selfcompassion is a positive attitude towards oneself that accepts one's own shortcomings and strengths when experiencing failure. Self-compassion is correlated with positive and negative affect. Therefore, this study aims to determine whether there is a relationship between self-compassion and emotional well-being in academically high ability students. This study used a non-experimental quantitative design. Sampling in this study was done by convenience sampling technique. Respondents in this study amounted to 254 students from several universities in Indonesia who have a GPA above 3.50. The measuring instrument used in the research is the Self-Compassion Scale (SCS, Neff, 2003) and the Scale of Positive and Negative Experience (SPANE; Diener, 2009) which have been adapted in Indonesian. Furthermore, the data was processed using SPSS version 22. The results of this study indicate that selfcompassion has a significant positive relationship with positive affect and a significant negative relationship with negative affect on academically high ability students. This study implies academically high-ability students need to develop a good selfcompassion to be able to have positive emotional well-being.

#### **KEYWORDS**

Self-Compassion; Emotional Well-Being; Positive Affect; Negative Affect; Academically High Ability Students

#### **OTW32**

## A Narrative Exploration on the Reconciling Multiple Identities of a Gay Medical Student

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#### ABSTRACT

Cultural studies focus on the process by which we become a human being, how we are shaped as subjects, and how we identify with, or become emotionally invested in, our gender, ethnicity, or age characteristics (Barker, 2000). The purpose of this study is to explore the complex adjustment faced by a medical student during his studies and to consider how we can support students in adjusting to multiple identities. The participant, A-Bai, has multiple roles. His mother is a new resident from Vietnam. He is a mathematics and science gifted student, a university medical student, and a gay. The Theory of Quadruple Consciousness (Means & Mitchell, 2014) and Scholar Identity Model (Whiting, 2006) were applied in the interviews to explore A-Bai identity process and coping with being labeled a gay. Interviews included participant's experiences of oppression, stigmatized identities and the cooperation or devoured of multiple identities. Results were as follows:

1. A-Bai experienced stigmatized bullying by peers and family neglect. However, his status as a math and science gifted student enabled him to gain recognition for his learning advantages. He actively integrated into the community, made his peers identify with multiple roles, and expressed his sexual orientation not invisibly, but visible and spoken, of which fits Whiting's (2006) pattern.

2. Just as Mitchell and Means (2014) predicted, A-Bai vacillated between the heterosexual and non-heterosexual categories. Although he entered college with complicated relationships with other gays, he found his natural space and voice. He understood how and when to adjust his identity and get the competencies he needs to achieve in college.

Based on the finding, the researchers suggested that students should not be left alone to undertake adjustment as they are in transition and need the necessary support to reinvent themselves on the continuum of identity (Sewell & Goings, 2019).

#### **KEYWORDS**

Math and Science Gifted Student, Reconciling Multiple Identities, Theory of Quadruple Consciousness, Scholar Identity Model

#### OIN91

## The Relationship between Intelligence and Executive Function among Gifted Adolescents

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#### ABSTRACT

#### Introduction

Executive function is a term for a number of complex cognitive processes that are interdependent and critical to purposeful, goal directed behaviour (Goldstein, et.al, 2014). Gifted adolescents have high cognitive flexibility, metacognition, strategic planning, and working memory, they have extensive knowledge of various things. But Silverman (2013) and Pfieffer (2018) said that gifted students have problems related to FE, that is planning, organizing problems, lack of time management, and impulsive. However, evidence for the relationship between intelligence and executives function is inconsistent, so the purpose of this study was to determine the relationship between intelligence and executive function in gifted adolescents

#### Methods

Participants are132 gifted adolescents aged 13-15 years. Data collection on intelligence using the Culture Fair Intelligence Test, FE used a neuropsychological test tool, namely the Wisconsin Card Sorting Test, and Stroop Color and Word Task online version, Trial Making Test, and Digit Span (DS).

#### Results

The results showed there was no significant correlation between intelligence and executive function in gifted adolescents (r=0,104; p<0,05). However, there was a significant relationship between intelligence and WM (DS) r=0.347; p <0.05. Nevertheless, there is a significant relationship for intelligence and WM (DS) r=0.347; p<0.05

#### Conclusion

The results showed an insignificant correlation between intelligence and EF in gifted adolescents, intelligence only related to two domains of executive function, namely inhibition and working memory.

#### Reference

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#### **KEYWORDS**

Gifted Adolescents, Intelligence, Executive Function

#### OSG48

### Be Kind to Yourself: Strengthening Students' Growth Mindset and Wellbeing with Self-Compassion

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#### ABSTRACT

As students enter early adolescence, they become more self-conscious. When encountering failure (as they perceive it), they often berate themselves and get stuck in negative thinking patterns. They begin to doubt their potential and over time, may become more susceptible to anxiety and depression. Self-compassion offers an avenue for students to tame their inner critic, replacing it with a voice of support, understanding, and care for oneself (Neff, 2009). Research has found that students with higher self-compassion are more likely to have higher self-efficacy, or confidence in their ability to succeed, and lower fear of failure. They also take responsibility for their past mistakes, while at the same time being less upset by them and show more motivation to improve in areas of weakness (Neff & McGeehee, 2010; Long & Neff, 2018).

To help students overcome self-doubt and show more compassion to themselves, a lesson package integrating the three components of Self-compassion – mindfulness, self-kindness, and common humanity (Neff, 2011) – were designed and delivered during Primary Five Character and Citizenship Education (CCE) lessons. Through these lessons, students learn to bring mindfulness to their thoughts, become more self-aware, and recognise unhelpful thinking styles – or thinking traps – which are often automatic and hard to spot. They learn to practise self-kindness and self-compassion by reframing these negative thoughts, showing themselves the same kindness and care they would give others. Through these exercises, students realise they are not alone in their imperfections / shortcomings and view their challenges as a part of common humanity that everyone undergoes. Rather than withdrawing or isolating themselves, they learn resilience and self-compassion.

Drawing on student artefacts and feedback, this presentation will highlight key considerations when designing self-compassion interventions for gifted and high-ability learners. We will also share some self-compassion tools and practices that teachers can incorporate into their classrooms.

#### **KEYWORDS**

Self-Compassion, Self-Kindness, Well-Being, Self-Efficacy

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#### **OIN109**

# Peer Support Scale Development for Junior High-school Gifted Students in Indonesia

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#### ABSTRACT

The support of peers is an important factor for achieving academic achievement of gifted students at the junior high school level. Support from peers is needed by gifted students to increase learning motivation and concentrate on learning activities. The peer support scale was developed to measure voluntary interactions between individuals characterized by affection, sharing of happiness, and reciprocity so that friendships are formed, which have a positive effect on the emotional and social development of individuals. The peer support scale has four aspects, namely: informational support, direct assistance, friendship, and appreciation. The peer support scale was developed using the Likert method and tested on 45 gifted students studying in junior high school. Content validity was calculated based on Aiken's V with a score of 0.833 -1, construct validity with a loading factor of 0.6 - 0.972 for 12 items. Each aspect has four items. The peer support scale has a reliability score of 0.845. Based on the validity and reliability obtained from the trial, it can be recommended to use the peer support scale for gifted students studying in junior high schools in Indonesia.

#### **KEYWORDS**

Peer Support Scale, Gifted Students, Junior High School, Scale Validity, Scale Reliability

#### **OTW127**

### Comparison of Over-excitability, Perfectionism, and Autism Spectrum Traits among High School Students in Different Classes

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#### ABSTRACT

This study aimed to compare and contrast the performance of students in mathematics and science gifted classes(MSC), language gifted classes(LGC), science classes(SC) and ordinary classes(OC) on the "Me Scale" (OE), "Multidimensional Perfectionism Scale" (MP) and "Short Version of Adult Autism Spectrum Disorders Scale" (AQ). Participants were 1081 high school students, including 207 MSC students, 187 LGC students, and 115 SC students. The findings of this study are as follows:

- 1. The OE characteristics of the gifted students are higher than those of ordinary students.
- Based on the MP finding, gifted groups score higher on the scales of Personal Standards and Organization than did the other groups. Compare the differences between MSC and SC students, the group from SC showed a lower level of perfectionism.
- 3. There are significant differences found between MSC, SC and LGC students on the AQ scale. The gifted group from LGC has the lowest score on the AQ scale, on the other hand, both the groups from MSC and SC score higher on the full AQ scale.
- 4. In terms of gender differences, boys and girls have different OE traits. On the MP scale, boys show higher on Parent Expectation and Parental Criticism subscales than girls. On the AQ scale, boys' scores are higher on the Behavior Patterns than girls', whereas girls' scores are higher on the Social Skills and Attention to Detail than boys'.
- 5. Findings revealed a significant relationship between the OE and the perfectionism. The higher level of emotional variability the student has, the more consultation the student needs. Our research results suggest that more guidance and counseling should be provided for those student with higher level of Emotional Variability.

#### **KEYWORDS**

Academic Aptitude Talented Class, Autism Spectrum Traits, Science Classes, Over-Excitability, Perfectionism

#### OHK17

## Celebrating Giftedness: Developing Pre-Service Teachers' Readiness in Gifted Education

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#### ABSTRACT

This paper reported on a programme design aiming to nurture pre-service teachers' understanding on the social and emotional needs of gifted students with an experiential learning approach. Teachers are always the protagonists in the education of gifted students and yet, they also demonstrate stereotypes towards gifted students that are associated with lower social and emotional skills. Social and emotional learning intertwines with academic learning, and therefore, teachers' knowledge, skills and particularly their attitudes and insights towards the cognitive and emotional needs of gifted students matter. While there are considerable mixed results on the research findings related to the emotional vulnerability of gifted students compared with their same-age peers, teachers' awareness and understanding towards these controversies will prepare them to support both families with gifted and non-gifted populations. While there are some studies focusing on teachers' experiences in gifted education, there is a paucity of studies that investigate how universities prepare pre-service teachers (PST) in this regard. In responding to this gap, twelve PST were recruited to participate in a credit-bearing experiential learning programme to support seven gifted students and their parents. The PST received input training related to the social and emotional needs of gifted individuals and were scaffolded to design a series of workshops that promoted such awareness. A parent briefing session was conducted after the workshops so as to involve parents in nurturing their gifted children. Qualitative data that grounded in the lived experiences of these PST including debriefing sessions and reflective notes were collected. The overall programme design together with students' learning experiences will be shared. Findings would inform fieldwork practice on nurturing the gifted individuals.

#### **KEYWORDS**

Experiential Learning, Pre-Service Teachers, Programme Design, Social and Emotional Needs, Qualitative Study.

#### OSG26

# The Integrated Programme (IP) School Teacher's Role, in Singapore's Gifted Education Programme (GEP)

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#### ABSTRACT

This oral presentation explains the historical background and recent developments of Singapore's Gifted Education Programme, as well as the current concerns of talent development curriculum leaders, in Integrated Programme (IP) schools. This sharing hopes to provide educators with a historical understanding of the evolution of Singapore's GEP, alongside the nation's economic, political, and social developments. The influence of various conceptions of gifts and talents on the development of gifted education in a Singaporean context are also explored. Participants will gain an awareness of the curriculum considerations of School Based Gifted Education (SBGE) Programmes in the IP, and explore approaches to bloom talents, by promoting a caring school environment for our gifted and talented students to embrace diversity and flourish.

#### **KEYWORDS**

Conceptions of Giftedness, History of Gifted Education in Singapore, Integrated Programme, Talent Development.

#### OUS124

## World Hope Project: Gifted Children from Around the World Expressing their Voices and Sharing their Vision for the Future

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#### ABSTRACT

The World Hope Project is an international children's video troupe comprised of kids ages 8-18 from 25 countries with a mission of spreading messages of hope and ideas for positive societal change. While providing inspiration to the viewing audience, this project also provides valuable opportunities to the gifted participants: it encourages problem solving, appreciation of differences, support of one another's ideas, optimism and teamwork as a catalyst for positive change.

The project involves a great deal of collaboration. Initially, through survey and videoconferencing, the team brainstormed a list of global issues that caused them concern. The co-producers ranked the responses identifying the issues of greatest priority to the group. Prior to the creation of each video, the team meets virtually to generate ideas. A creative production plan is set forth and each child is presented with options for their role and scene.

Ideas continue to be shared through email exchanges, group chat interactions, and a collaborative online document. Children send their scenes to the co-producers for editing and the final product is presented to them to gather feedback before the video is released to the public and shared on social media.

In further collaboration, several adults who resonate with the mission of the World Hope Project volunteer their expertise with translation and various aspects of project development.

The World Hope Project will be presented as an avenue for diverse collaboration. Coproducers of the project, from therapeutic and educational disciplines, will reveal details of its evolution and insights gleaned from the process. Attendees will gain an understanding of the benefits and challenges of diverse collaboration with children, as well as a framework for creating similar partnerships. Attendees will also gain insights into the benefits of intergenerational and interdisciplinary collaboration. This presentation will include video excerpts from the World Hope Project.

#### KEYWORDS

Collaboration, Hope, International, Social-Emotional, Diversity, Creativity

## OCA22 Stories of Radical Acceleration: A Canadian Perspective

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### ABSTRACT

The University Transition Program (UTP) is a radical acceleration program that supports profoundly gifted students to complete a traditional five-year high school program in two years. These radical accelerands matriculate into university as young as 14-15 years old. Insights into formalized radical acceleration high school programs that result in early entry to university are limited in the extant literature because these programs are also limited in implementation. UTP alumni are uniquely situated to provide feedback on this rare educational intervention. Using a mixed-methods retrospective survey questionnaire, this study aims to answer the question: How should radical accelerands be best supported through their experiences of radical acceleration and early entry to university? In the context of their own lived experiences, alumni were asked to reflect on what they appreciated about the UTP and early entry to university, as well as the supports that they wish they could have received. These reflections provide insights into how practitioners can holistically support students with advanced learning needs through their academic, socioemotional, and affective development.

#### **KEYWORDS**

Acceleration, Socioemotional Development, Self-Regulation, Achievement, Life Outcomes

#### OCH43 The Research on the Practice and Effect of Role Model Education to Gifted Students

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#### ABSTRACT

This research focuses on practice and effect of role model education to gifted children. Role model education is a very important strategy for multiple talent development of gifted children. Even though there are many celebrities in society as role models, gifted children prefer role models who have similar experience with them such as outstanding alumni. With a long history of gifted education in our school, there are many excellent gifted graduates who have been excel in varied fields. Based on this abundant available resource, we carried out this role model education practice and research. 11-year-old students interviewed excellent graduates in front of the whole class through online meeting for four semesters until they are 12 or 13 years old. In this process, students could exert their own strength and learn the diverse talents from interviewees. The research showed that role model education played a great role in improving students' learning motivation, clarifying learning objectives and developing multiple intelligence. Moreover, it could help students overcome the difficulties in current learning and life, and improve students strengthen when facing difficult challenges and develop multiple intelligence.

#### **KEYWORDS**

Role Model Education, Student's Interview, Multiple Intelligence

#### OCA145

# Analyzing Mothers' Attitudes about giftedness: Identify Challenges and Needs

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#### ABSTRACT

**Background:** Parenting a gifted child has unique experiences that can differ from the lived experiences of parents raising normal children. These experiences typically increase concerns, influence decisions, and exacerbate stress regarding gifted children's future development and education (Jolly & Matthew, 2012). Parents can have a significant role in their child's development, particularly during early childhood, through everyday interactions and support by providing an atmosphere that promotes the child's later outstanding outcomes.

**Research goal:** The study's goal is to understand the developmental challenges among gifted children through the interview of their mothers as primary caretakers. **Research questions:** This study aims to answer the following questions: (1) What are the attitudes of Iranian parents about giftedness? (2) What do parents face some perceived challenges in developing? (3) What are the significant differences in the development of gifted children with normal children? (4) What is how parents deal with the developmental challenges of gifted children? (5) Parents, as primary caregivers, how provide the context for addressing the challenges and special needs of gifted children?

**Research design:** This study adopts a grounded theory design and uses a convenience sampling strategy to recruit 20 mothers with gifted children aged between 3 and 7.

**Data collection:** A semi-structured questionnaire design for the interview. The researchers also conduct direct observations in preschool and home settings. **Data analysis**: In keeping with the grounded theory approach the overall analytical strategy will be a bottom-up approach, namely starting with segmenting interview data to low inference codes and gradually developing a conceptual structure to organize and integrate the codes (Hill et al., 1997). The study will apply Strauss &

Corbin (1990) coding paradigm that entails a three-phase thematic analysis protocol: Open Coding, Axial Coding & Selective Coding.

**Results:** This study will elucidate gifted children's developmental challenges and special needs and attitudes toward giftedness based on their primary caretaker's observations.

**Discussion**: This study can help parents and teachers better understand the needs of gifted children and how to deal with them, and as an educational topic to pay special attention to their children's cognitive development and unique abilities. The bottom-up approach of this study will also bring the likelihood of developing a conceptual model that describes the needs and challenges of gifted children.

#### **KEYWORDS**

Parents, Lived Experiences, Gifted Children, Challenges, Special Needs, Grounded Theory

#### OCH40

## The Relationship between Mental Health and Parental Bonding of 10-Year-Old Intellectually Gifted Children

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#### ABSTRACT

The purpose of this study is to explore the mental health status of 10-year-old intellectually gifted children, the differences of parental bonding and the relationships between mental health status and provide new ideas and methods for intellectually gifted children's psychological development and family education. Ten-year-old intellectually gifted children in Beijing were investigated by Middle School Student Mental Health Scale (MSSMHS) and Parental Bonding Instrument (PBI). In 2020, the detection rate of 285 intellectually gifted children 's mental health problems was 8.42%. In 2021, the detection rate of 242 intellectually gifted children 's mental health problems was 11.98%. The factors with the highest detection rate were compulsion and emotional instability. Paired sample t-test showed that mothers cared more for their children and encouraged more autonomy than fathers (P < 0.01), and mothers controlled their children more than fathers (P < 0.01); Pearson correlation analysis showed that father's and mother's care and encouragement of autonomy were significantly negatively correlated with the total average score of mental health problems (P < 0.01), father's and mother's control were significantly positively correlated with the total average score of mental health problems (P < 0.01). Logistics regression analysis showed that mother's high care, father's high care and father's low control were protective factors for children's mental health (P < 0.05). The parental bonding style of parents has a significant impact on the level of children's mental health. Parents should pay attention to giving children more care in family education, encourage children's independent development and reduce excessive control over children.

#### **KEYWORDS**

Mental Health; Parental Bonding; Care; Autonomy; Control

# OTW31 A Study on the Data Analysis of Research Literature on Family Parenting Styles of Gifted Students in Taiwan

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#### ABSTRACT

This study analyzed the research literature on the family parenting style of gifted students in Taiwan in recent years, summarizing the influence and trend of family parenting style on the learning of gifted students. The data analyzed were from 2000 to 2021 and the database included domestic doctoral dissertation, master thesis and academic journal articles. Sources included NCL Taiwan Periodical Literature, National Digital Library of Theses and Dissertations in Taiwan and Airiti Library. Key words were gifted, gifted and talented, parenting and family upbringing.

After precluding non-empirical research, 13 papers were eligible, consisting of 7 professional journals and 6 dissertations. After deducting duplication of dissertations and journal publications, a total of 11 empirical research papers were formally used for analysis. This article then summarized the domestic research literature on the parenting styles of gifted students in recent years in terms of "educational stage", "research method", "research tool" and "research results." Findings were as follows:

1. Regarding the achievement motivation of gifted children, two literatures showed that when parents treat their gifted children in a democratic, open and caring way of parenting, their children will feel more love, encouragement and reasonable requirements, so they have a strong pursuit of achievement and perfect performance.

2. In terms of emotional intelligence, two studies have showed that parenting styles not only shape their children's personalities, but also establish their children's behavioral patterns, and indeed affect their children's emotional intelligence development.

 In terms of leadership skills, a study indicated that there is indeed a correlation between the parenting style of gifted students and leadership skills.
 The results of the study showed that different parenting styles were associated

with the achievement motivation of gifted students, that advising teachers to strengthen the promotion of parenting education.

#### **KEYWORDS**

179 Gifted Student, Parenting Styles, Study Analyzes

#### OCA05

# Explanatory Factors Predicting Reading Success of Academically Gifted Students Through the Perspective of Ecological Model

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#### ABSTRACT

This study aims to discover explanatory factors that predict reading scores for academically gifted students in Canada by using the PISA 2018 database. The ecological model was utilized to investigate the ecological background of reading success in this study. In line with the literature, five potential explanatory factors were examined among the items in the student questionnaire. Exploratory factor analysis (EFA) was used to detect factors, and Cronbach's Alpha values of each factor (internal consistency) were calculated. Structural equation modeling (SEM) was performed to create a model explaining reading success. Afterwards, indices of goodness-fit-criteria were examined. The findings indicated that there is a complex background for reading. All predictive factors (i.e., Disciplinary climate in the classroom [DC], sense of belonging [SB], perception of competence in reading [PC], perception of difficulties [PD], and cognitive flexibility/adaptability [CF]) have a positive effect on reading. Therefore, according to the results of the factors of classroom disciplinary climate and social belonging in the school environment, school context must be regarded as an important instrument for improving reading in gifted students. Perceptions of reading competency and difficulty factors display that the perspectives of students have a major impact on reading scores. Finally, as an indicator of intelligence -e.g., adaptive intelligence, students with higher cognitive flexibility/adaptability levels also have higher reading scores.

# **KEYWORDS**

Giftedness, Gifted Education, Reading Success, PISA

# OHK08

# Self-Regulated Learning Strategies of Gifted Students in Online Learning Programs

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#### ABSTRACT

Online program is widely regarded as one of the appropriate options for gifted students to learn outside of schools along with technological advancement. However, few studies have examined the impacts of self-regulated learning (SRL) strategies in the context of online programs for gifted students. The present study focused on this aspect and examined the log data of 1907 students of four online learning programs for giftedness. In addition, a self-retrospective questionnaire on SRL strategies adopted was administrated and responses from 157 gifted students, who enrolled in the same online learning programs, were received. Firstly, regression analysis was undertaken, which regarded the behavioral indicators identified from the log data as independent variables and student performance as dependent variable. The regression results revealed that students who engaged actively in self-quizzes and revision exercises provided in the online programs were more likely to achieve higher levels of performance. Secondly, clustering analysis was conducted with questionnaire responses on SRL strategies from students. Examining the resulting two-cluster solution, it was found that "goal setting and planning", "rehearsing and memorizing" and "reviewing tests/notes/texts" were the top-three SRL strategies that discriminated these two clusters. The percentage of students, who obtained the highest level of performance in the online programs, was significantly different between the two clusters. Thus, the importance of these three SRL strategies for online learning was empirically supported. Collectively, the findings of the current study could provide directions for the design of online learning platform so that appropriate learning support and tools could be contrived and delivered to enhance student performance by promoting their uses of appropriate SRL strategies.

# **KEYWORDS**

Gifted Students, Online Learning, Self-Regulated Learning Strategies, Learning Analytics

# An Innovative English Course Design in a Traditional Prestigious Senior High School

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#### ABSTRACT

The promotion of Taiwan's 12-Year Basic Education Curriculum Guidelines emphasizes the needs of gifted students in terms of creativity, independent research, affective development and leadership, in addition to the adjustment of subject areas. For teachers in subject areas, how to take into account the special needs of gifted students under the curriculum requirements of education is a big challenge. Through the deepening and widening design of the English curriculum, this research integrates the concept and spirit of the special needs curriculum for gifted students, and develops teaching contents and activities that are different from traditional teaching, combining environmental education issues, creative thinking strategies, independent research methods, and the process of teamwork. This curriculum also stimulates students' learning motivation and creative potential. Through the teacher's observation, interviews with students and analysis of their works, we can understand students' feelings, strategies and difficulties in learning English, their feedback on and suggestions for this course, as well as their own help and growth in the field of special needs. All of these can be used as a reference for teachers to design and adjust the course in the future teaching to English gifted students.

# **KEYWORDS**

Gifted English Course, 12-Year Basic Education Curriculum Guidelines, Syllabus Design for Special Needs

# Developing Inquiry Abilities: Independent Study Curriculum-Concept and Cases Analysis

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# ABSTRACT

This paper aims to explore the importance of independent study for gifted students and the actual practice in gifted resource rooms in elementary schools in Taiwan. For the special needs of gifted students, doing independent study allows them to discover the problems they are curious about in real situations, and to make further exploration and come up with resolutions. This is not only a response to the current talent development paradigm of gifted education but also a key competency for cultivating future talents. Therefore, this paper attempts to clarify the definition and scope of independent study and then discusses the role and positioning of independent study in the gifted education curriculum in elementary schools. Finally, taking the independent study cases of two elementary school gifted resource rooms, to explore the actual practice of independent study and the performance of students as a reference for the application of the integration of independent study theory and practice.

# **KEYWORDS**

Independent Study, Inquiry Abilities

# **OCH58**

# Curriculum Development of the Original English Book Reading Instruction for the Intellectually Gifted Children

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# ABSTRACT

The current research attempts to develop a systematic curriculum of original English book reading instruction for the gifted children at Beijing No. 8 High School, China, which aims to cultivate students' reading literacy.

In view of the long-standing problems of insufficient English reading volume, low interest in reading and fragmented and unsystematic extracurricular supplementary reading materials of the gifted children, the foreign language teacher group of Quality Class of Beijing No. 8 High School has begun to try and explore the original English book reading instruction since 2016. After five years of practice and exploration, the study has defined the original graded reading list in grade 1-4 of the Quality Class, edited the reading log for grade 1-4 students, designed the students' learning plan of reading bibliography in class, and compiled the teaching strategies for reading the whole book of the original English reading materials. This study establishes a teaching model combining intensive reading in class and extensive reading after class, which greatly stimulates students' interest in reading, cultivates students' good reading habits, significantly improves students' reading literacy, and improves foreign language teachers' ability of text analysis and teaching of original English book readings.

#### **KEYWORDS**

Gifted Children, Original English Books, English Reading Literacy

# OHK69

# Enhancing Equality in Learning Opportunity – Develop Effective School-Based Enrichment Programmes for Underachievers with High Ability

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#### ABSTRACT

In Hong Kong, most of the gifted programmes focus on developing gifted achievers. Without proper teacher trainings in the concept of giftedness, most of the schools do not have sufficient resources and knowledge to identify and support the underachieving gifted students. The educational needs of underachieving gifted students are overlooked. It is even more struggling for the underachieving students with underprivileged background. Those students are not only lacking support from school, but also lacking of resources from their family. It is therefore creating another kind of inequality in learning opportunity. The purposes of current project are (1) to provide suitable education for the underprovided gifted student with underachievement to develop their talents at school; (2) to provide an opportunity for teachers to gain insights of their students' talents and receive guidance on their talent developments; (3) to develop a local community of gifted education experts in long run; and (4) to change the perspective the general public in gifted education. By implementation of the innovative "Integrated Supporting Model", which provides the systematic teacher training in gifted education to school teachers, follows by the designation and implementation of school-based enrichment programmes. The programmes are targeting on the educational needs of the underprivileged underachieving gifted students. Current project is ongoing with two case studies with preliminary results. The quantitative and qualitative feedbacks from students and teachers were positive, also with observable improvement in students' academic performance and learning motivation.

# **KEYWORDS**

High Ability, Gifted Education, Underachievement, Underprivileged, Enrichment Programme

# OHK135

# Teaching for Creativity in an Online Course

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# ABSTRACT

In the past three years, many university courses had to move online because of the pandemic. Even though there are challenges in teaching and learning, most teachers and students have been able to adapt quickly and overcome difficulties. In an age of uncertainties, it is especially important to be creative and flexible when facing unexpected challenges.

This presentation will focus on a course in creativity for Master of Education students. The first session was conducted face-to-face but the rest of the course had to move online because of the pandemic. Participants in the course were introduced to the theoretical concepts of creativity as well as practical strategies for nurturing creativity in others. Through reflections on their own teaching practices, participants also exercised creative thinking and developed more creative behaviors. Content analysis was employed to investigate elements of teaching for creativity and creative learning. Strategies for online teaching will also be discussed, which will be useful for educators and practitioners.

# **KEYWORDS**

Teaching for Creativity, Creative Learning, Online Learning, Master's Level, University Course

# OCH107 The Effect of Practical Life-Centered Math on Three Kinds of Intelligent Children

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# ABSTRACT

The purposes of this study are to investigate the characteristics and potentials of the children to learn math, to develop a set of Practical Life-Centered Math (PLCM) for children to learn. The courses were divided into time, distance, length, position, weight, capacity, multiplication, and division, there were eight math units in total.

The study samples based on observations of class teachers and scores of Test of Nonverbal Intelligence, to screen 61 kindergarten children in Zhanjiang City, were divided into the gifted group (n=20), the general group (n=23) and the lower group (n=18). To Implement teaching experiments of the six consecutive weeks, twice a week, two classes of each teaching.

According to the teaching results and measured scores by self-designed Test of Math Achievement for Children before and after treatment were analyzed: The results showed that the gifted group on time unit, weight and capacity unit and multiplication unit; and general group on time unit and length unit had reached significant differences; but the lower group at all units did not reach. Finally, based on the findings, suggestions for teachers' instructions, educational administrations, and further studies were made.

# **KEYWORDS**

Early Childhood Education, Early Childhood Math Curriculum, Early Childhood Math Teaching, Early Childhood Math Measurement.

The Learning Effects and Differences of Mathematically Gifted Students with Different Learning Styles in the Application of Merging Music into Science Learning: A Case Study of Circular Motion

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# ABSTRACT

The main purpose of this study was trying to find out the difference between different learning styles after receiving the course by using the way of merging scientific concept into songs to teach 8th grade gifted students. Subjects were 40 students from two classes of Taipei municipal junior high school. Twenty students in one class were from Tatung district for the experimental group and 18 students in the other class were from Wanhua district for the control group. There was significant difference between experimental group and control group. It seemed that this kind of way could help those students of aural, visual, read/write and synthesized style and not help those of kinesthetic style very efficiently. Besides, there was also significant improvement for students after receiving the class through scientific video about scientific attitude, especially on "the attitude toward the teacher".

# **KEYWORDS**

Taipei Municipal Junior High School, Mathematically Gifted Students, Circular Motion, Learning Style, Scientific Attitude

# **OTK62**

# **Gifted Students: How Preschool Teachers Perceive Them**

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#### ABSTRACT

For many years, early childhood gifted education was neglected, but in recent years, studies on the subject have increased. One of the most critical issues in removing barriers to early childhood gifted education is determining teachers' perceptions of gifted students. Because teachers' perceptions about gifted students influence their behavior toward these students and direct their practices for identification and education. The aim of this study is to examine preschool teachers' perceptions about gifted students. Preschool teachers from various schools will engage in this qualitative study, which will be conducted using a convenience sampling. Data will be gathered through metaphors and open-ended questions about gifted students and their education. Preschool teachers will be asked to complete the statement "Gifted students are like......; because.........". In addition, the preschool teachers will be asked to reply to a few open-ended questions in which they can express their ideas on gifted education in early childhood. The study is expected to contribute to determining teachers' implicit conceptions about gifted students, identifying preschool teacher training needs, and formulating policies for early childhood gifted education.

#### **KEYWORDS**

Gifted, Preschool, Teacher, Perception, Metaphor

#### **OAU86**

# The Provision of Advanced Curriculum Topics to Gifted Students: Research and Practice

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#### ABSTRACT

According to Joseph Renzulli, the major purpose of gifted education is to increase the world's reservoir of creative and productive people—the people who will become the inventors, authors, scientists, artists, entrepreneurs and the business, political, religious, social, and economic leaders of the future. (Renzulli, 1977)

In this process, the provision appropriate learning opportunities are instrumental in gifted students' achievement of their full potential (Gagne, 1985).

To identify the nature of such opportunities, studies suggest the factors involved in academic achievement based on the attributes of gifted students of increased awareness, attitude to learning, curiosity and sense of exploration when compared with their non-gifted peers (Saricam & Sahim, 2015).

It is because of these characteristics, that gifted students require access to more advanced, challenging curriculum. In turn, the advanced curriculum provides avenues for developing strengths and pursuing interests (Emerick, 1992),

It was demonstrated that the result of such interventions is an increased motivation for learning, which was placed by Gagne as a crucial element in gifted students' achieving their full potential as part of his DMGT model (Gagne, 2010).

While existing studies have explored the introduction of advanced topics, such as Calculus, Quantum Physics, Communication Philosophy and more, to secondary students, very limited research has focused on primary school students, and even less on the response of the students in the early years to advanced content.

This presentation will explore our work with gifted students at BRAINways Education in providing advanced topics, through the analysis of the feedback provided by students at the conclusion of each program. Our results confirmed the findings of existing research suggesting an increased enthusiasm for learning and motivation following the added challenge of the provision of advanced topics to secondary students. In addition, similar outcomes were demonstrated in the primary school group, including in the early years, highlighting the importance of providing advanced opportunities to gifted students of all ages.

#### **KEYWORDS**

Gifted, Curriculum, Advanced Topics, Challenge, Achievement, Motivation, Creativity, Early Years, Primary Students, Secondary Students

#### Project-based Learning Applied in Mathematics and Science Learning

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#### ABSTRACT

In the curriculum of mathematics and science education, there is a growing need to design activities in real-world settings that follow a specific plan and focus on the creative process rather than just the outcome. It requires students to choose strategies and make decisions for solutions in every situation they face, which is in line with the spirit of Project-based Learning (PBL). While research regarding PBL is bountiful, little has been done to connect this body of research with student perceptions regarding its classroom application, especially concerning authenticity and student engagement. This article is about analyzing and sharing two high school students conducting a research project on meaningful issues related to bird's window collisions in Taiwan. The purpose of this paper allows students to naturally connect the creative activities of mathematics and science education with the problem-solving process by implementing PBL in a real-life setting. This paper mainly referred to the content of PBL activities proposed by Bell (2010), including (1) defining problems; (2) discussing ideas; (3) designing inquiries; (4) collecting and analyzing data; (5) sharing findings (Bell, 2010; Chen & Yang, 2019). The author also analyzed how the two students (6) *sought help* when they encounter difficulties, asked new questions through (7) *creative thinking*, and then solved problems through the mathematical method. All these processes might be more precious than the results. This article also presented two students' (8) emotions about life, environment, or beauty, that highlighted the inner meaning of this PBL for the two high school students. It is hope that more teachers are willing to share, criticize, and give feedback to each other, to promote the development of mathematics and science education through authentic activity sharing.

#### **KEYWORDS**

Project-base Learning, Mathematics and Science education, Window-Collision

# OTK110

# Early Childhood Gifted Education in the 2000s

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#### ABSTRACT

This study includes a systematic review of early childhood gifted education in the 2000s. For many years, early childhood gifted education was overlooked, but it is nowadays a topic on which more research has been conducted. Articles between 2000 and 2022 would be included in the study, and we defined inclusion and exclusion criteria before searches for articles. Articles written in English and Turkish which were published in peer-review journals were included. Book reviews, proceedings, and editorials were excluded. To conduct the systematic review search terms like "early childhood, young, preschool, early years, gifted, talented, high potential, high achiever" were entered with various combinations in the ERIC. Academic Search Premier, and TR Index (Turkish Index-TR Dizin). At first, the articles were gathered by reviewing the titles and abstracts and then duplicates, book reviews, proceedings, and editorials were removed. At the end of first step, approximately 95 articles met the inclusion criteria. The full-text review part of the study continues, and the points where the researchers disagree are discussed with the whole group and resolved. After the second step, the remaining articles will be analyzed due to different themes. The study's implications and suggestions are expected to contribute to future early childhood research and policies.

#### **KEYWORDS**

Gifted, Early Childhood, Preschool, Review

#### OAU94

# Striving to Put Theory into Practice. Insights from the Victorian High Ability English Program (VHAP).

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# ABSTRACT

The VHAP program recognises the clear educational differences of the gifted cohort and strives to meet their needs through withdrawal and extension.

This presentation makes links to the theoretical suggestions of researchers including John Munro, Robert Sternberg, John Hattie and Robert Marzano to cater for gifted learners. Observations will be made between theory and practice.

Through showcasing examples of what our high ability teaching looks like in practice, the presentation aims to illustrate how the Victorian public education system is embracing theory, with an evidence based and researched informed English teaching and learning approach. Specifically, the presenters will discuss learning task design taken from across the 5-8 VHAP English programs. The presenters will highlight the team's persistent and conscious focus that aims to ensure both curriculum and pedagogy take account of:

- 1. Students' enhanced metacognitive capacity to self-manage and direct their learning.
- 2. Students' greater working memory capacity and increased ability to process and manipulate higher information loads to engage with high level cognitive tasks.
- 3. A pedagogical approach that seeks to honour and scaffold students to integrate understanding from various codes which support engagement, making analogies and synthesising multiple layers of learning so they can create their own unique product.
- 4. Deliberate utilisation of an 'expert known model,' to support student critical and ethical thinking, analysis and metacognition so students move from working as a novice, to working like an expert practitioner.

Munro, J. (2013).

The presentation will illustrate the importance of double loop learning. The presenters will acknowledge the impressive commitment of the Victorian government to engage experts to design and implement a systemic approach to cater for high ability learners. The programs provide differentiation and access to academic rigor, quality learning opportunities, exposure to complexity as well as opportunities for high ability students to collaborate.

# **KEYWORDS**

Theory, Practice, Curriculum, Pedagogy, Withdrawal, Extension

# OHK07

# Study Skills and Personality Characteristics of Gifted Student Members and Its Impacts to Online Learning During COVID-19

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#### ABSTRACT

Online learning mode plays an important role in the educational setting these years, especially during the COVID-19 crisis. In mid-2021, the Hong Kong Academy for Gifted Education (HKAGE) conducted a survey to assess the impacts of gifted students' personality characteristics using Big Five Inventory (BFI) and their study skills to their online learning performances during the outbreak of COVID-19. Besides, focus group discussions with students were conducted to understand the situations of their online learning. A total of 293 HKAGE primary and secondary gifted students participated in the questionnaire survey. In the survey, IT provision of their families, learning environment, school support, and relevant demographic characteristics were considered as well. Our results revealed that the negative impact of agreeableness of a student to his/her online learning performance. This indicated the importance of being independent in online learning. On the other hand, provision of collaborative learning opportunities in online learning would be crucial for students. Besides, the positive impact of conscientiousness to online learning was prominent. With respect to the study skills, time management and information literacy of a student had significant positive impacts to his/her online learning. Moreover, better IT provision and school support had positive impacts to the students' online learning. Based on focus group discussions, it was found that students with a high level of performance were more focused and attentive in their learning and achievements. They could also turn the risk into opportunity and could do thing even better than before, as well as generate extra benefits. Collectively, the findings of the study could provide insights and directions for designing student courses in HKAGE so that they could be equipped with appropriate skills and learning attitudes for better performance in online learning.

# **KEYWORDS**

Gifted Students, Big Five Inventory, Study Skills, Online Learning

#### OTW45 Facilitating Students' Science Learning by Using their Notes as Literacy Assessment Tools

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#### ABSTRACT

It has long been the main development goal of science education that teachers should facilitate students to learn science effectively. The 12-Year Basic Education Curriculum Guidelines also expects the students to learn spontaneously and apply their knowledge in everyday lives. However, it is just in the beginning, and most of the junior high school teachers are not familiar with them. This paper aims to present assessment results of science literacy by using a student's notes under the implementation of Inquiry-based learning model. The student was asked to explore the knowledge like scientists and to take notes when doing two experiments. By examining the student's notes, teacher was able to detect his misconceptions, and used these findings as references to design the literacy-based assessment tools. The teacher collected the student's scientific notes three times, analyzed the content of the student's notes illustrated the purpose of the experiment, the experimental process, the results and the acquired scientific concepts. The student's notes improved over time and the emergence of misconceptions reduced.

#### **KEYWORDS**

Inquiry-Based Learning Model, Gifted Students, Notes, Literacy Assessment

# OAE138

The Impact of Program Activities Based on the Theory of Unlimited Talent in the Development of the Skills of Divergent and the Development of Motivation for Creativity for the Basic Phase

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# ABSTRACT

This research aims to identify the impact of a training programme that adopts the talents unlimited model (TUM) on developing divergent thinking skills and enhancing the motivation for the creativity of elementary school students in the UAE, by using the experimental method.

The research aims to answer two main questions: what is the impact of the activities of the multiple talent programme on developing the creative thinking skills of sixth-grade students in the UAE and developing their motivation for creativity?

The research sample consisted of (42) female and male students from Al Nouf Elementary School for Girls in Sharjah, and Al Bidaa Elementary Education School for Boys in Fujairah, divided into experimental and control groups. To achieve the research objectives, I designed a training programme that follows the talents unlimited model. In addition, a motivation scale was developed consisting of 29 Likert items.

The results indicated statistically significant differences between the average marks o students in the experimental and control groups in favour of the experimental one on the dimensional and total divergent thinking test (the total) and its five sections (title, details, originality, flexibility, fluency) and on the motivation test in its six dimensions.

The results indicated that the programme moderately interpret the dependent variable. Based on the results, the researcher concluded the following:

- The talents unlimited model has a significant impact on developing divergent thinking skills among the subjects in the experimental group. The students acquired the skills to develop and provide various ideas. In addition, the model enhances the students' ability to suggest creative and unconventional ideas.

- The talents unlimited model activities have a clear statistical significance as demonstrated by the average scores of the experimental group. Subjects in this group showed a high level of thinking skills and motivation for creativity.

# **KEYWORDS**

Talent Unlimited Programme, Divergent Thinking Skills, Creative, Motivation

# OTK77 A Meta-Synthesis Analysis on EFL: Gifted Students

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# ABSTRACT

The aim of this study is to analyze the articles written on the argumentation to find out the diversity of education techniques, the needs, the learning tools, the learning difficulties, the motivation, the teaching methods, the perceptions and the attitudes of gifted students in English language learning by using meta-synthesis method. Within the scope of the study, the articles conducted since 2010, were selected in this field. In the selection of the 35 articles, but not dissertations, National Thesis Centre of the Council of Higher Education (YÖK) and google scholar were used. Each study was examined according to the keywords such as; gifted students, English language learning, talented students, English language teaching, English as a second language. The studies were identified in accordance with the content analysis consisting of the aim, the sample, the data collection tools, methods and the results. As a result, it was found out that most of the studies mainly used qualitative research methods by some data collection tools such as interviews and observation. furthermore the attitudes, perceptions and biases of the gifted students towards language learning were positive. As samples, mostly, the participants were teenagers, aged between 11-18, and the difficulties, the technology and some language learning strategies were consisted of the subjects of the studies.

# **KEYWORDS**

Meta-Synthesis, English Language Learning, Gifted Student.

#### OJP65

# Giftedness in Inclusive Classrooms – Cross-cultural Examination of Student Teachers' Thinking in Five Countries

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#### ABSTRACT

We present our research examining student teachers' thinking about teaching gifted students in inclusive classroom context. In addition to being the most likely place for teachers to encounter gifted students, well-supported inclusive classrooms are also places where the learning and other needs of the gifted can be well met (e.g. Borland, 2003; Eyre, 2001). 'Teacher thinking' refers to knowledge and concepts that teachers use to plan, interact, and reflect on teaching, intertwining with teachers' beliefs and attitudes (e.g. Levin & He, 2008). Grounded in narrative paradigm we analyzed student teachers' stories from Finland, Austria, Turkey, Philippines, and Japan find out what kind of solutions they imagine in response to a situation with gifted students in their inclusive classrooms. Our aim was to uncover similarities and differences in framing these solutions. As a result, six solution categories emerged: 1) Giving the students more challenging or motivating tasks, 2) encouraging peer learning and using the gifted student as an assistant teacher, 3) communicating (in the classroom) to understand and solve the situation, 4) guiding students to learning opportunities beyond the school, 5) consulting colleagues, experts, parents, or principals, and 6) developing one's own capacities as a teacher. The more equity and equal treatment were at the forefront educational thinking, the stronger the tension between focusing on the gifted versus focusing the other students tended to be. Student teachers showed hesitance of giving special attention explicitly. The results point to a need to equip future teachers with research-based knowledge about how all the students, not just the gifted, experience pedagogical actions aimed at them. Our findings have implications for developing teacher education to nurture future teachers who understand the meaning of cultural contingencies. The potential of

narrative pedagogies in fostering the skill of imagining alternatives to teachers' actions is explored.

# **KEYWORDS**

Gifted and Talented Children, Inclusive Classroom, Teacher Thinking, Method of Empathy-Based Stories

#### OTK60

# Enhancing the Use of Augmented and Virtual Reality in the Teaching of Gifted Students Suggestions for the Current Practice

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#### ABSTRACT

This research aims to determine the current technological products that teachers working in science and art centers (BILSEM) prefer in their teaching processes, and to then provide AR / VR solutions for their observed lessons based on those findings. This research was conducted using a case study. In this study, five BILSEM teachers and one instructor from a variety of fields including elementary education, mathematics, Turkish, English, and art were observed using semi-structured forms. The average observation time for each teacher was 20 lesson hours. During the observation, the teachers' technologies were also evaluated in terms of teaching, learning, functionality, and usefulness, forming the basis of AR/VR proposals. A content analysis was used to analyze the data in the research. Among the most striking findings of the study was that while mathematics teachers do not often use technology, elementary education teachers often use games (Minecraft, Kahoot) and design applications (Canva). Additionally, only the elementary education teacher gives place to the AR application (quiver). In the research, AR/VR solutions are suggested for each branch. As an example, even though the elementary education teacher was the only one to incorporate AR technology in a simple manner, the following could be done in her class. Using AR technology and introductory videos, scientists could be displayed alongside their avatars, and students and faculty could be given the opportunity to meet their avatars through virtual reality glasses.

#### **KEYWORDS**

Augmented Reality, Virtual Reality, Needs Assessment, Gifted and Talented Students, Technology in Education

# OTK140 How to Design Challenging Reading Materials for Gifted Students M. Davut Gül

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#### ABSTRACT

Many studies reveal that the reading comprehension skills of gifted students distinct significantly from those of non-gifted (Ökcü & Akgül, 2021; Özcan, 2018). They have superior cognitive abilities in analyzing, synthesizing, and interpreting reading material (Catron & Wingenbach, 1983). Despite that gifted students have these distinct characteristics and demand challenging reading materials (London, 2020), their academic need is generally ignored. The problem causes gifted students not to reach their full potential, resulting in delayed improvement in their reading progress and diminished opportunities to learn how to react to challenges (Reis et al., 2004; Reis & Boeve, 2009). Many studies indicate that this issue results from the unwillingness and inability of teachers to provide gifted students with appropriately challenging reading materials (Reis et al., 2004). Studies also show that there is less research on how to construct challenging reading materials and that there is a need for research in supporting gifted students to receive more challenging work (Bui, Craig, & Imberman, 2014; Roessingh & Bence, 2017). Therefore, this study aims to improve and present an analytical framework for designing and analyzing challenging reading materials. While realizing this, the notions of text cohesion, text processing and discourse comprehension guide this study. The former refers to consist of characteristics of the explicit text that play some role in helping the reader mentally connect ideas in the text. Text cohesion represents the extent to which a text explicitly provides background information and cues to help readers relate information distributed across different parts of the text. The latter refers to a dynamic process involving an interaction between attributes of the reader and the text, the cognitive processes, and the context. The proposed framework generally focuses on attributes of text like cohesive and lexical ties. The multilevel discourse comprehension framework also enlightens this study in explaining rhetorical composition and the epistemological status of propositions and clauses. Within the perspective of these frameworks, the goal of the present study is to develop a framework for preparing appropriate level challenging reading materials. The development consists of two steps. First, the criteria for designing challenging

reading material are derived from the research on text design and comprehension. That leads to a coherent theoretical framework that requires empirical justification. Therefore, the second step is an exploration of the applicability of the framework. The framework will guide teachers and researchers in constructing and analyzing reading materials. There are two main elements (each includes different dimensions) that guide this analytical framework in designing and analyzing challenging reading materials: cohesiveness of text (local and global cohesion) and argumentative structure of the text. Cohesion refers to linguistic elements (i.e., words, features, cues, signals, constituents) in a text that helps the reader to relate information from sentence to sentence and across a text. Argumentative structure of text refers to texts that make explicit the justification for their stated claims through hypothesis, investigations and data by making evocation and refutation (Kloser, 2013).

#### **KEYWORDS**

Reading Material, Analytical Framework, Gifted Education

#### OJP118

# Online STEAM Education Programme for Gifted Young Girls during the COVID-19 Pandemic

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#### ABSTRACT

Ehime University in Matsuyama, Japan, has been running a special science education programme, Kids Academy, for gifted young children since 2010. During the coronavirus disease pandemic, the activities have developed, with its main activities changing from face-to-face to online. Kids Academy initiatives include 1) the "Gifted Academy" online seminar, mainly aimed at parents, teachers, and policy makers, 2) special science courses for gifted young children, 3) contests for children and research mentoring, and 4) international joint research and international networking regarding education of the gifted. This presentation focuses on the Winter School, conducted from December 2021 to January 2022. Six gifted young girls-one in kindergarten, four in grade 1, and one in grade 2—participated in the programme. The winter school comprised four one-hour lessons. In the first lesson, the children learned about food nutrition and calories and then made dried apples. In the second lesson, they took part in creative activities related to sound. The third lesson taught about the human body and medicine. In the fourth and final lesson, the participating children presented their original research. The results of the post-school questionnaire showed that the school's level of difficulty was appropriate for the participants. Many parents also stated that both their children and themselves became more familiar with everyday phenomena and events, and that the experience expanded their thinking. This implies that this special STEAM programme for young children had a positive impact on the young gifted girls as well as the parents. One of the most frequently-reported positive aspects of the course, according to the participants, was that they were able to concentrate on working on each subject.

#### **KEYWORDS**

Online Programme, STEAM Education, Gifted Young Girls, The COVID-19 Pandemic

#### OHK63

#### Consolidating Professional Competency in Gifted Education and Talent Development through Practicum: A Case in Hong Kong

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#### ABSTRACT

Teacher training plays a vital role in nourishing the gifted and talented students in daily teaching, support students' curiosity and creativity, nomination for advanced programs, contest, mentorship etc which let talent reveal. Teachers' attitude, knowledge, and competency are valuable assets to support timely intervention and sustainable talent development.

In the bachelor and postgraduate diploma teacher training in Hong Kong, gifted education and talent development is not regarded as a common core nor specialty. Pre-service and in-service teachers have limited chance to delve into this subject matter unless the training institutions highlight relevant concepts in courses. Although the Gifted Education Section of the Education Bureau provide regular seminars and courses in key learning areas (subject-based), differentiation strategies, STEM, affective education etc, most are in introductory level and short-term varies from 3 to 16 hours.

The Master of Education (MEd) specialized in Gifted Education and Talent Development offered by The University of Hong Kong aims to foster creativity, talent development, career preparation and address social-emotional concerns of the gifted and talented. In 2020 – 2022 cohort, the initiative of supervised individual practicum required MEd students designed, implemented, and evaluated an 18-hour enrichment program in a school or at an approved agency/organization in 4-month. 4 groups were formed with 5-6 MEd students with arranged group and individual supervision. MEd students could become peer consultants, receive deliberate feedback from the supervisor and groupmates, develop critical reflection of the practice for continuous professional improvement. The translation of theory into reallife application based on MEd students' individual strengths and preferences enhanced self-efficacy and professional competency along the practicum period. This paper will depict the structure, content, and impact of the practicum with the supervisors' and MEd students' reflective experiences. Interested teachers, practitioners, and policy makers can reference this practicum for future professional development.

#### **KEYWORDS**

Teacher Competency, Gifted Education, Teacher Professional Development, Teaching Practicum

# A Survey on Autonomous Learning of Regular Students and Gifted Students in Junior High School

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#### ABSTRACT

The purpose of the study was to understand the current situations of regular students' and gifted students' autonomous learning in Taiwan. With different background variables, the differences in regular students' and gifted students' autonomous learning were analyzed.

Autonomous Learning Questionnaire for Junior High School Students, a questionnaire, was designed for obtaining the data. There were regular students and gifted students from northern, middle, and southern Taiwan chosen as participants. There were 247 valid questionnaires from regular students and 174 valid questionnaires from gifted students. The data were analyzed through statistical methods of descriptive statistics, t-test, one-way ANOVA. The results of the study were as follows,

- 1. Regular students got an average of 3.55 in intrinsic factors of self-learning and an average of 3.70 in extrinsic factors of self-learning, showing their current autonomous learning situations are most in line with the description. As for the correlation, there were significant correlations between all aspects of autonomous learning's intrinsic and extrinsic factors.
- 2. Gifted students got an average of 3.82 in intrinsic factors of autonomous learning and an average of 3.92 in extrinsic factors of autonomous learning, showing their current autonomous learning situations are most in line with the description. As for the correlation, there were significant correlations between all aspects of autonomous learning's intrinsic and extrinsic factors.
- 3. Between different genders, there were significant differences in "strategy" and "teachers' support". As for different levels of academic performances, there were significant differences in "motivation"; "competence"; "strategy"; "positive atmosphere"; "teachers' support"; and "learning adjustment."
- Between regular and gifted students, there were significant differences in "motivation"; "competence"; "strategy"; "positive atmosphere"; "teachers' support"; and "learning adjustment."

5. Between all background variables, there were no significant differences in all aspects of gifted students' autonomous learning.

Following the results, some suggestions for general education, gifted education, and future researchers were offered.

# **KEYWORDS**

Autonomous Learning, Gifted Students, Self-Directed Learning, Self-Regulated Learning

# A Study on the Effectiveness of High School Gifted Students Participating in Leadership Associations

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#### ABSTRACT

Facing the fast-changing modern society, schools and society have the responsibility to develop the leadership potential of gifted students and provide them with opportunities to learn leadership skills. Gifted education should cultivate gifted students with the ability to lead themselves and then others. The purpose of this study is to explore the impact of high school gifted students' experience in participating in service-learning community activities on leadership development, and to analyze the relationship between students' participation in community activities and leadership development from the process of service-learning activity design, participation and development. This research adopts a case study, using multiple sources of evidence and multiple data collection methods, to study the current situation of high school math and science gifted students participating in service-oriented associations. Data analysis includes: case interview records, reflections, service logs, and activity plans and results reports, which are checked through the four indicators of "observation", "execution", "solidarity" and "influence." Findings are as follows:

1. High school gifted students' participation in service learning activities is positively correlated with leadership development. Participating in service learning activities can improve various leadership qualities of high school students.

2. In terms of observation, students can specifically observe the needs of others, maintain social care and sensitivity, as well as observe the life around them, and find problems in life.

3. In terms of unity, they can focus on teamwork and interpersonal interaction. Learn to effectively apply social resources, use their personal strength to work together with like-minded partners, learn to see each other's characteristics through teamwork, understand others and themselves at the same time.

4. In terms of execution, students have the ability to act in practice. They can propose solutions and solve problems through self-practice. They have the ability to

solve problems.

5. In terms of influence, students can exert a transformative power to affect the lives of others around them.

Based on the findings, the researchers put forward relevant suggestions on the leadership development of high school gifted students' participation in serviceoriented student associations for reference in subsequent teaching and research.

# **KEYWORDS**

Math and Science Gifted Student, Leadership

# The Talent Development Process of Gifted Students Based on Autonomous Learning Theory: Related Factors Exploration

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#### ABSTRACT

The potential and talent development of gifted students has always been an important issue for gifted educators. The implementation results need to be understood through long-term follow-up studies to understand the suitability of gifted education and learning opportunities whether that can benefit students. This study used qualitative and quantitative research methods such as interviews and surveys to explore the talent development process of gifted students based on the theory of autonomous learning, and to analyze the key factors affecting talent development. First, we invited 8 gifted adults with special performance in the professional field before the age of 18 to conduct interviews and explored the development process of their talents. The results concluded that the influencing factors related to talent development include personal characteristics and motivation, learning style and time. and family and school environment, etc., and summarized their performance in relation to autonomous learning. At the same time, 15 experts and practical teachers were invited to conduct a three-stage Delphi technique to sort out a total of 63 indicators related to ability, attitude, environment and behavioral performance. Finally, it will do a survey on their autonomous learning competence of gifted students and compare with regular students, and then develop curriculum of autonomous learning to explore the multiple possibilities of gifted education implementation.

#### **KEYWORDS**

Talent Development, Gifted Students, Autonomous Learning, Influencing Factors

# **OSA106**

# Distinguished Ophthalmologists' Perceptions of the Factors Leading to their Excellence

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#### ABSTRACT

This research investigated the development of career and cognitive productivity from the beginning of enrollment in education until reaching scientific and professional excellence in the fields of medicine. It aimed to describe the stages of career development and the quality of cognitive productivity for distinguished physicians in ophthalmology. To achieve this, this research adopted the qualitative method, based on the phenomenology design. In order to collect datahe researcher conducted retrospective interviews, through semi-structured interviews, with four (two males and two female physicians) distinguished in the field of ophthalmology to extract the outcome of their experience in their cognitive and career development during the various stages of their education and involvement in medicine. The results of the thematic analysis resulted in four stages (establishment, competence, experience, and excellence). These stages include the basic requirements for career development and excellence in cognitive productivity. They are 1) early psychosocial precocious; early mental brilliance, reflecting on the reasons for success, tacit/insider knowledge, self-confidence and responsibility, 2) cultural and social influence; the economic factor, geographical and cultural location, 3) experience and access to excellence; desire for excellence vs. a feeling of self-sufficiency, stages of professional development and cognitive productivity.

# **KEYWORDS**

Career Development, Cognitive Productivity, Distinguished Ophthalmologists, Expert Approach

The Boosts and Impediments in Talent Development: The Experience of Profoundly Talented Students Achieving in International Junior Science Olympiad

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# ABSTRACT

This study sought to understand the boosts and impediments in the talent development process of the profoundly talented students. A case study design was applied to collect the data from three International Junior Science Olympiad gold medalists. The researchers followed the achievement orientation model framework to analyze the data. The findings indicated three gold medalists getting inspired in the gifted education with enrichment and accelerating program in junior high school. Data also revealed that three gold medalists had good self-learning skills, and they were also good at doing self-regulation to aware and monitor their learning conditions and modify in their learning strategy. Most important of all, they still had humble attitude in front of the science and keep learning. However, the most impediments they faced come from environment mostly. First, they faced the massive pressure from the credentialism in Taiwan and the worries from their family. Second, not only gifted education or shadow education could not offer them more differentiated and personalized education program. Third, they had no direct support from their similar age classmates. To sum up, this research supported the educators to realize how to give the assistances to these profoundly talented students on their lonely and challenging talent developing ways to become higher achievers.

# **KEYWORDS**

Talent Development, Achievement Orientation Model, Profoundly Talented Students, Credentialism

# **OTK78**

# Using Metaphors to Examine Preservice Teachers' Opinions on Creativity

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# ABSTRACT

One of the important 21th century skills is creativity. Teachers have a key role on the development of the students' creativity in school. Revealing teacher candidates' perceptions and views on creativity may help to develop policy and practices for developing creativity on teacher training programs. Therefore, the aim of this study is to determine the perceptions of classroom teacher candidates about the concept of creativity and their views on how to support creativity in school. The participants of this phenomenological research are the senior year students studying faculty of education at Uşak University in Turkey. A data collection form, consisting of three parts (demographic information, a sentence for producing metaphor as "creativity in school) prepared by the researchers, will be used in data collection. After data analysis, the findings of the current study will be shared with the congress participants. Suggestions for teacher education will be developed in line with the research findings.

# **KEYWORDS**

Creativity, Teacher Candidate, Metaphor, Perceptions

# OHG159

# Who is the Shadow of Whom in Gifted Education: The Case of Asian Countries

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#### ABSTRACT

One of the most important topics in the literature on the development of gifted students is extracurricular education. Since extracurricular education varies in forms, pedagogy, psychology and sociology, the literature on this topic is very diverse (Olszewski-Kubilius & Lee, 2004; Pasku, 2001). Yet, a type of extracurricular gifted education has been relatively neglected in gifted development: supplementary private tutoring, or shadow education (Bray, 1999). Shadow education is for-fee extracurricular supplementary education focusing on academic subjects, mostly in mathematics, literature/mother-tongue, and foreign language (in most cases: English). It is typically either a remedial education for the students who lack behind in their studies or enrichment for the gifted students. Shadow education is often offered by individual entrepreneurs, while some are large tutoring companies. These companies compete in the market, offering the best and fittest programs for their student customers and the gifted. However, how giftedness is conceptualized, how the gifted students are identified, and how the shadow education industry can contribute to the development of gifted students and their success in gifted education in the formal educational contexts is rarely discussed in the literature.

Based on the review of English language literature (eg. Kim & Jung-Hoon, 2019; Ørberg, 2018; Zhang & Bray, 2018; Zhang & Yamato, 2018), I introduce the conceptualization of giftedness in the academic field, the identification, selection, tracking and teaching of gifted students, and the support provided in shadow education institutions in the Asian market. In my presentation, I shed light on the ways gifted education in Asian shadow education institutions doubles the developmental processes of the gifted students, running parallel processes with formal educational programs for the gifted in the schools. I also introduce how some Asian countries' shadow education institutions (1) Precede formal educational institutions in gifted identification and development and (2)Carry out some preselection and pre-development among them compared to formal education institutions (Gordon Győri, in print). The practice is a remarkable and alarming new phenomenon in gifted education. Therefore, at the end of my presentation, I discuss why this phenomenon deserves more attention from gifted development experts and educational policymakers.

## **KEYWORDS**

Gifted Education; Shadow Education; Asia, Double Selection and Development

## OHK142 Gifted Education Professional Training: A Pre-service Teacher's Reflection and Inspiration

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#### **ABSTRACT:**

Teacher training is crucial in the education of gifted and talented students, regardless of whether it is used in normal lessons or extracurricular opportunities, since it lets students discover their talents and fosters the growth of their creativity. However, gifted education is not a highlight in the Hong Kong pre-service teacher training since the focus of bachelor and postgraduate diploma courses is generally placed on tackling the more "pressing" issues for local teachers, such as curriculum development and special education needs. Although the Education Bureau and other organizations provide related training programs, they are mostly short-term and preliminary.

The postgraduate diploma level elective course, named "Supporting gifted and talented learners in schools", is offered by the University of Hong Kong. This course aims to help students establish a firm foundation in understanding the nature of gifted education, and encourage an appropriate attitude toward supporting gifted and talented learners. It also provides participants with the skills for identifying gifted and talented learners, and develops participants' knowledge and skills for planning, implementing and evaluating gifted education programmes. The eight three-hour sessions also allowed students to exchange views with in-service teachers, who shared how they applied gifted education theories in real-life classrooms. Still, there is a lack of practicum opportunities in relevant pre-service teacher training due to time constraints and level of commitment. This paper will detail the structure and content of the course, along with the impacts shared by course participants. The paper also suggests an experiential learning component that lets teachers apply what they have learnt in lectures to their classrooms, and get feedback from their instructors and peers. It is a whole year teaching practicum alternative, which provides students with a longer timespan to consolidate their knowledge and help them develop a gifted education mindset for their use in the future. Finally, this article addresses the lack of relevant teacher training for pre-service teachers. Interested

teachers, practitioners and policymakers can reference this program and the suggestions raised for future professional development.

## **KEYWORDS**:

Teacher training, gifted education, experiential learning, teaching practicum, time constraints

## OIN46 The Implementation of Gifted Education in Indonesia

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## ABSTRACT

Indonesia is one of the countries in the world that emphasizes the importance of educating gifted children as shown by the implementation of numerous gifted programs over the past few decades. However, each country has its own uniqueness in developing these programs, especially Indonesia which is known for its diversity. This narrative review aims to identify and summarize: (a) the approaches Indonesia uses to develop and implement gifted education programmes and (b) how gifted education is executed.

Articles were identified through Garba Rujukan Digital (Garuda), a publicly available repository created specifically to identify registered Indonesian published journals. Screening and eligibility check was carried out on the abstracts followed by the full-text papers to choose which articles are included in this study.

A total of 25 articles were included in this study out of 122 records identified, while the other 97 records were duplicate, irrelevant, or incomplete in terms of full text availability and explanations. Four keywords are consistently mentioned when discussing the approaches to gifted education in Indonesia: acceleration, differentiation, inclusion, and enrichment. Various gifted education programs are implemented at the kindergarten to high school level; targeting academic (e.g. extracurricular programs, specialized module development, interactive learning models, etc.) and non-academic talents (e.g. the establishment of sport talent schools, character education teaching, etc.). An important point that is repeatedly discussed in the literature is that each school has its own method of educating gifted students.

Based on this review, it can be concluded that the implementation of gifted education in Indonesia is well on its way to achieving its ideal state. To accelerate this process, each party involved needs an equal understanding of the essence of gifted education in Indonesia so that the issue of the diversity of approaches and methods can be thoroughly discussed.

## **KEYWORDS**

Indonesia, Learning Methods, Gifted Education, Narrative Review

## **OTW52**

## A Cross-Country Comparison of the Development on Gifted Education Acts, Policies, and Practices in Taiwan and Finland

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## ABSTRACT

Taiwan and Finland are both committed to promoting gifted education or cultivating students with special talents. In recent years, they have performed well in large-scale international learning evaluations and student competitions as well. The way they cultivate talents has attracted worldwide attention. However, there are considerable differences between the two countries in terms of historical and cultural backgrounds, educational philosophy, the policies and practices of gifted education.

By means of cross-country comparison, we can understand their different development approaches of gifted education and realize its unique characteristics and values.

This paper compares the educational policy backgrounds of the two countries through the method of documentary analysis and the policy theory, trying to depict its development approaches, trends, similarities, and differences.

Besides, the researchers further analyzed and discussed the current situation of educational practice in two countries on four aspects, including the legal source, identification and placement, services provision, curriculum and teaching.

We look forward to taking this opportunity to thoroughly understand the diverse forms and developing trends of gifted education in Taiwan and Finland. Hoping to increase the understanding of the diverse concepts of gifted education for educators, and as a reference and reflection for future policy development of gifted education in the Asia-Pacific region.

## **KEYWORDS**

Cross-Country Comparison, Gifted Education, Legal Policy, Taiwan, Finland

## OUS165 RS2e: Reimagining Socializing for Twice-Exceptional Students

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## ABSTRACT

Socializing has changed and continues to do so in the midst of this pandemic. While there are many confounding struggles that our students are facing daily, we must also recognize that socializing itself is transforming.

This presentation walks participants through a strength-based, talent-focused approach to supporting twice-exceptional students on their journey to connect with others in ways they feel happiest.

The overall aim is to:

1. Empower our kiddos to socialize successfully and sustainably

2. Encourage parents and educators to inventory and challenge preconceived ideas around socializing

The presentation takes participants on a journey through 10 research-based strategies to accomplish the 2 aforementioned goals.

Additionally, those who stay until the end will receive FREE BONUS resources to further student and parent growth at home!

## **KEYWORDS**

Twice-Exceptional, Socializing, Strengths-Based, Social-Emotional Wellness, Talent-Focused, Self-Esteem, Positive Psychology

## OTW100 Leland Lee, A Twice-Exceptional Learner Where Autism Takes a Back Seat

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## ABSTRACT

Leland Lee is a thirty-three-year-old genius artist. He has autism and was authenticated a savant in art when he was seven years old. Leland is also a natural athlete; his autistic traits enable him to be focused and excels in repetitive sports such as swimming, ping pong and is currently learning to play golf.

Painting to Leland is as natural as speaking to others, it is an instinct and is how Leland processes what he sees. Where does Leland get the content? Parents, teachers, schools, public and private programs play a key role in contributing life experiences and visual experiences that become elements in Leland's paintings.

Leland, mother Karen and teacher Michele will share Leland's story, how he benefitted from enriching programs mixed with Leland's own energy in learning that transformed him into a young man who speaks two languages, plays guitars, swims competitively and writes Chinese calligraphy.

## **KEYWORDS**

Autism, Twice-Exceptional, Savant, Art

## OHK27

## Empowering Teachers in Nurturing Creative and Critical Thinkers Through Design Thinking

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## ABSTRACT

'Becoming' gifted has become an important paradigm shift in gifted education with an emphasis on the process of nurturing important cognitive skills like critical and creative thinking skills. While the field of gifted education has always pioneered innovation in terms of pedagogy, this paper contributes to the discussion on advancing teacher training in one of these innovations, that is, design thinking. Design thinking refers to a designedly way of knowing that captures an iterative and nonlinear process of generating innovative solutions to ill-defined problems. While it has a wide application in the business setting, the growing trend of adopting such an approach is also observed in K12 environment. The design thinking process has specified five clear stages for learners to go through in a problem-solving process, namely empathizing, defining, ideating, prototyping and testing. Such important process has great potential to embed both creativity and critical thinking into students' learning. This paper reports on a 3-year project that aims to develop teachers' competencies to design challenging learning activities to diverse learners through design thinking. Aligning with NAGC's new set of standards issued in 2019 on engaging teachers as partners in the professional learning process, our model incorporates experiential learning components in the process with teachers wearing the designers' hats and actively problem-solve authentic problems in their emergent schools. The experiences shared in this paper will inform fieldwork practice in nurturing creative and critical thinkers for tomorrow.

## **KEYWORDS**

Creative Thinking, Critical Thinking, Design Thinking, Experiential Learning, Teacher Education

## OKO112

## Development and Validation of 'Integrated Creative Achievement Test' for University Students

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## ABSTRACT

Research on creativity is being conducted from various perspectives, and attention is focused on the integrated perspective that individual cognitive ability and affective characteristics are developed and determined through interaction with the environment. Especially, if creativity is divided into general creativity and domain creativity, general creativity is important in university students, but it also focuses on creativity as a competency to solve problems by emitting ideas and solving problems in connection with major areas. So, it is very important to cultivate domain creativity related to problems such as career, occupation, and start-up. Therefore, it is necessary to identify the concept of creative achievement and how the university students recognize it, what achievements have been achieved in relation to creative work or activity, and what efficacy is related to creative achievement. In this regard, the purpose of this study is to define integrated creative achievement as the integration of individual and group creative ability and creative personality, achievement in various fields, and creative efficacy, and to develop integrated creative achievement tests to measure it. The first research step is to define the concept of creative achievement by analyzing previous studies on creativity, and next deriving the components and sub-factors and confirming the content validity through experts. And data are collected and analyzed to identify statistical validity and reliability. Preliminary and main tests were conducted for 700 university students currently attending university to collect data, and exploratory factor analysis, confirmatory factor analysis and construct validity were confirmed. If the reliable and valid integrated creative achievement test is developed through this study, the degree of creative achievement of university students can be measured and analyzed using this test, and it can be used as reference material for improving the university curriculum that can cultivate students' creative competence.

## **KEYWORDS**

Integrated Creative Achievement Test, Creative Ability, Creative Personality, Creative Efficacy, Creative Achievement

## OTW119

# The Creative Teaching Crisis to Primary School Teachers from the Research of Creative Competency Indicators

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## ABSTRACT

The promulgation of the Curriculum Guide of 12-Year Basic Education announces "core competency " as the key point of the national basic education, and promotes the curriculum outline of the special needs field related to the gifted students. In addition to hoping that the creative competency of students can be effectively cultivated in the teaching process, hopefully it could also find out how to effectively guide the creative competency of students, and to evaluate the effectiveness of creativity teaching.

Through the process of constructing creative competency indicators based on the curriculum, mixed-methods research is suitable for the researcher and by using UNIANOVA to find out the bright and blind spots of primary school teachers in Taiwan on the promotion of creativity competency, which are summarized as follows:

1. Female teachers are more likely to discover students' personal creative traits.

2. Female teachers with award-winning experience are more likely than male teachers to discover students' creative traits.

3. Teachers with creative techniques are more likely to win awards than teachers who do not use techniques.

4. Teachers who use techniques will be able to see the creative performance of students.

5. Gifted class teachers are significantly more accustomed to using creative techniques than the general teachers.

According to these findings, we can suggest teachers on how to bring students' creativity competency up by these conclusions.

## **KEYWORDS**

Creativity, Creativity Competency, Special Needs for Gifted, Curriculum Guidelines

## **OKO56**

## Mapping Professional Teaching Competencies for Gifted and Talented within the Philippine Professional Standards for Teachers

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## ABSTRACT

Teacher quality is one of the key factors influencing student achievement and well-being in schools. As such, professional standards about the skills, attitudes, values, and motivation of teachers of the gifted and talented are of great importance in promoting students 'holistic growth. Furthermore, taking particular attention on teachers' competency can have impact on the teachers 'practice and professional learning. A content analysis of the competencies from National Association for Gifted Children National Standards for Gifted and Talented Education (NAGC-NSGTE) and the Philippine Professional Standards for Teachers (PPST) is used to determine how teacher competencies for gifted and talented education are represented in Philippine's national professional standards for teachers. Analysis revealed that NAGC teacher competencies can be sufficiently mapped out against the eight (8) PPST Domains. However, there are competencies in the national standards that needs to be further articulated to represent the salient features of teaching the gifted and the talented. Identified areas of emphasis can serve as a guideline in further developing professional standards and learning to address the specific needs of gifted and talented education in the country.

## **KEYWORDS**

Gifted Education, Teacher Competencies, Professional Learning, Teacher Quality

## **OKO61**

## Early Childhood Math Education Program Based on Sternberg's Theory of Successful Intelligence: Development and Effects

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## ABSTRACT

The purpose of this study was to develop an early childhood math education program based on Sternberg's theory of Successful Intelligence and explore its effects on children's mathematical ability, creativity, and creative problem-solving ability. Main research questions and subsidiary questions were given to investigate the effects regarding the purpose of the study.

The sample was composed of 76 five-year-old children at two kindergartens in Seoul. For data analysis, the SPSS 24.0 program was used with a paired-sample t-test and multivariate analysis (MANOVA) to compare pre-and post-test results.

The results of this study are summarized as follows.

There was a statistically significant improvement in mathematical ability in the experimental group compared to the control group. Moreover, the sub-domains of mathematical ability, such as Algebra, Number properties and operations, Geometry, and Measurement showed statistically significant improvements in the experimental group. The sub-domains of creativity, also showed statistically significant improvements in the experimental group. Lastly, the experimental group showed statistically significant improvements in the experimental group. Lastly, the experimental group showed statistically significant improvements in the creative problem-solving ability score, including the sub-domains, Exploring the challenge, generating ideas, and Preparing for action.

In conclusion, the results revealed that the early childhood mathematics education program based on Sternberg's successful intelligence theory has a positive affect on mathematical ability to general 5-year-old children, and may be provided to younger aged gifted preschoolers, thus contributing to the field of early childhood math education.

## **KEYWORDS**

Young Children, Infans's Math, Successful Intelligence, Math Learning, Math Teaching

## **OTW111**

## The Application of Blended Teaching Strategies in Gifted Curriculum Design

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## ABSTRACT

The impact of Covid-19 has had a far-reaching impact on the education contexts. Even though teachers and students might not familiar with online tools for virtual learning then, they were forced to shift rapidly to distance and online learning in replace of face-to-face learning. Teachers empowered technical skills, online teaching media and platforms to improve teaching effectiveness within a short period of time. Meanwhile, students who learned online were also quickly familiar with the skills of online learning, gained knowledge and even developed interpersonal relationships in the virtual world. As the pandemic subsides, gifted teachers may sense qualitative changes in students` learning style. Traditional place-based classroom cannot meet the learning needs of students. To overcome the dilemma of distance teaching, the objective in this paper is to describe strategies for teachers combining blended learning to redesign gifted curriculum, especially designing a hands-on curriculum.

## **KEYWORDS**

Blended Learning, Gifted Curriculum, Curriculum Design

## OHK09

## A Study on the Psychological Characteristics of Gifted Students Enrolled in Entrepreneurship Programme

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## ABSTRACT

A gifted programme for secondary school students on entrepreneurship was conducted in mid-2021. The programme lasted for eight months and provided 50 selected gifted students with the opportunities of getting a taste of entrepreneurship. Entrepreneur has several unique psychological qualities. In the current study, five main aspects were concerned: Entrepreneurial Capacity, Belief, Consciousness, Motivation, and Determination. The study assessed these psychological characteristics of the gifted students before the programme. For comparison, identical information from 198 general students with a similar profile (in terms of age and gender) was collected. The data revealed that gifted students had significantly higher scores, especially in Entrepreneurial Capacity and Motivation. This might reflect the characteristics of giftedness, and also might be the reasons why they were interested in the programme. On the other hand, there was no significant gender difference; but lower grade students got significantly higher scores in Entrepreneurial Motivation and Determination. Thus, nurturing entrepreneurship should start from younger ages. It was also interesting to note that those students with higher study interests in various subjects (especially in Humanities and Languages), which might reflect a higher degree of enthusiasm and curiosity, got significantly higher scores. After completion of the programme, the students' psychological characteristics on entrepreneurship were re-assessed. Significant positive changes in Entrepreneurial Capacity and Belief, and some mild positive change in Entrepreneurial Conscious were observed. This provided supportive evidence for the programme effectiveness. However, no correlation between students' overall performance (which was mainly based on attendance and group projects) and their psychological characteristics was found, except Entrepreneurial Capacity displaying a weak correlation, 0.17. This might suggest a room for improvement in the assessment of student performance in the programme. Collectively speaking, the findings of the study provide directions for designing entrepreneurship programme and selecting appropriate candidates in future.

## **KEYWORDS**

Gifted Students, Psychological Characteristics, Entrepreneurship, Programme Evaluation

## OKO120

## Global Leader Program based on Global Leader Model (GLM) and Multiple Intelligence (MI) for Young Children

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## ABSTRACT

Education to promote talented people who can take their role in future society should be systematically conducted from early childhood. Future talents should be global leaders with creative confluence capabilities that can actively respond to rapidly changing societies. Global leaders are self-directed talents that have creativity and creative problem-solving ability, have various areas of knowledge, and can be integrated into various problem situations. Therefore, if such education for future talent development is based on the global leader model (GLM) proposed by Lee (2009) and multiple intelligence (MI) considering intelligence in various fields, it will be more effective. Therefore, this study introduces the creative convergence English program that is developed based on the GLM and used in the 'Telli & Geni kindergarten' in Seoul. The curriculum of this program is designed to integrate cognition (knowledge, thinking), creativity, leadership, and to promote the ability integratively. Meanwhile, MI domains of this program were composed of language-social, mathematical, inquiry(science), and leadership areas. The Global Leader Program will be adapted for 5 to 7 years old, and as an example of inquiry (science) classes, children can discover and understand that the form of fingerprints is different from person to person through inquiry activities. Therefore, the program in this study is applied to the four subjects, so that young children can be improved cognition (knowledge, concept, understanding, inquiry, analysis, comparison, etc.) and creativity (fluency, flexibility, originality, imagination, curiosity, sensitivity), leadership (self-management, respect for others, helping behavior) and this program introduced in this study will be effective if it is applied to education to foster global leaders in the future.

## **KEYWORDS**

Global Leader Model (GLM), Multiple Intelligence (MI), Young Children, Cognition, Creativity, Leadership

## OHK76

Positive Psychology and Social Competence of Gifted Teenagers: Become a Better Friendsmaker

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## ABSTRACT

Social competence refers to the effectiveness of a person to engage in social interactions with others. This has been a topic of concern to researchers and practitioners of gifted education. While some of the literature suggests that gifted adolescents are more well-received by peers, other studies focused on the psychological barriers that they tend to have in building relationships and fitting in social situations because of the feeling of 'different'. Scientists of positive psychology identified 24 character strengths which are a family of trait-liked positive parts of our personality that impact how we think, feel and behave. The theory explains that every individual possesses all 24 character strengths in different degree (Niemiec, 2013). This paper reports the impact of a positive psychology training program. The program served 200 secondary school students in Hong Kong in 2021. In the model we adopted, students are facilitated in various modes to understand both their signature character strengths and less developed strengths. Both quantitative and qualitative data were collected after the program. The study discusses how learning about character strengths improves social competence of adolescents and hence their capacity in social relationship building. It provides practical skills for educators and parents who are keen on social-emotional development and character building.

## **KEYWORDS**

Social Competence, Positive Psychology, Character Strengths, Peer Relationship, Social-Emotional Learning, Parental Education

## **OIN122**

## Comparing Grit among Sport-Talented High School Students across Three Differentiated Talent Development School Programs

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## ABSTRACT

Grit is one of personal attribute that correlates positively with sports achievement. Studies have shown that it can be fostered by school through a harmonious teacherstudent relationships, adopting mastery-goal orientation, and teaching persistence in students. School's role in nourishing sport-talented student becomes relevant because school is where young student-athletes spend most of their time. Hence two types of schools are specially designed for sport-talented students in Indonesia, namely the Sport Talented School (SKO) and the Student Sports Training Center (PPLP). The difference lies in the sport-focused academic curriculum, student admission based on sports achievements and nominations from coaches, the existence of degradation system, and learning schemes that include intensive academics and sports routines. Thus, this study aims to discover the differences in high school students' grit at SKO, PPLP, and the regular schools in Indonesia. The Grit Scale for Children and Adults (GSCA) by Sturman & Zappala Piemme (2017) (a= 0.84) was used to measure grit. One-Way ANOVA showed significant differences in the grit levels of regular school students and SKO students, showing that grit is influenced by school as student's microsystem.

## **KEYWORDS**

Curriculum Model, Enrichment Program, Grit, Special School, Sport Achievement, Sport-Talented Student

## **OKO130**

## Retrospective Perceptions on the Emotional Experiences of Gifted College Students during Their School Days

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## ABSTRACT

The purpose of this study is to examine the emotional experiences of gifted college students during their school days and to examine whether there are differences between male and female students in this experience. For the study, a total of 222 students including 145 male students, and 77 female students participated. Most of the students who participated in this study graduated from science high school and lived in a dormitory. All of them are science gifted students, and they had excellent grades in math and science during school days. Participants were asked about emotional experiences during their school days through a questionnaire Female students reported emotional difficulties during their school days. They told that the evaluation of their appearance and verbal harassment by male students. Prejudice against female students' achievements in mathematics and science, intragroup and inter-group conflicts due to gender imbalance in school, and preoccupation with women was presented as negative emotional experiences. Male students also presented the conflicts caused by a specific gender imbalance in the school and preoccupation with male gender roles as emotional difficulties. Male students also expressed dissatisfaction with teachers' unconditional support for female students when conflicts arose with female students.

As a result of the study, both male and female students experienced conflict and stress during their school days due to prejudice and preconceived notions placed on each gender. In particular, science gifted students seemed to experience psychological difficulties while living in a dormitory.

Since this study investigated the emotional experiences of both male and female gifted students during their school days, it will help conduct gifted education programs and counsel gifted students.

## **KEYWORDS**

Science Gifted Student, Emotional Experiences, Gender, Gifted Female

## PTW25 Shifting Notions of Giftedness and Talent in the Digital Age

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## ABSTRACT

Turing published his seminal article "Computing Machinery and Intelligence" in 1950, leading the world towards a new type of intelligent operation, and the Dartmouth Conference in 1956 confirmed the development of a new field of "artificial intelligence". Then in the Cold War period after World War II, the US Defense Advanced Research Projects Agency developed the ARPANET network for the transmission of information between different computers, which is the predecessor of the Internet, a new direction for the virtual world. This article investigates the relevant research from 1950 to the present utilizing a literature survey, and summarizes the current moment, whether the "smartest" human beings or the "smartest" machines in the world seem to have escaped the physical and physiological boundaries at the same time. It combines the emotional mind and logical operation into the vast virtual universe, forming a new type of human civilization under the collective joint consciousness, mortal vs machine, real vs virtual. The author borrows Einstein's idea of integrating time and space, matter and energy into general relativity, and describes this concept of giftedness as a new type and new era of general relative giftedness and talent. Perhaps the outstanding talents in the future will no longer be an innate trait belonging to a single individual, but a collective shared wisdom network that combines human and machine and does not distinguish between reality and virtuality. Therefore, the author believes that gifted and talent education and identification will follow a major change in the future.

## **KEYWORDS**

Artificial Intelligence, Gifted and Talent, Digital

## The Family Experience of Three Highly Gifted Students

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## ABSTRACT

Researchers of Highly gifted have often suggested that students' Achievement are related to their family and the education level of their parents. However, research which has empirically documented the link between highly gifted development and their family is scant. Therefore, the aim of this article attempts to explore the family and parenting of highly gifted students and to construct their family experience.

The research comprised of two sets of in-depth interview concerning family atmosphere, significant events, family interaction and strategies of parenting highly gifted children. Three highly gifted students and their primary caregivers participated in the study. In order to construct the family experience of the highly gifted, the narrative methods and content analysis are used to make sense of the data in this study.

Results of this study showed their growing-up environment which filled with intimacy, concern and respect. They also experience similar events includes their first highly intellectual performance, to be identified a gifted and how they suffered from their perfectionism, sense of responsibility and excellent abilities.

To conclude, this study may be of importance in describing the family experience and indicated that excellent abilities and characteristics are not only innate but also learn from surroundings. Furthermore, researcher explained their family activities, their early characteristics as well as in providing parents and future researchers with a better understanding of parenting highly gifted students.

## **KEYWORDS**

Narrative Inquiry, Highly Gifted Student, Highly Gifted, Family Experience, Parenting Highly Gifted

## Giftedness in light of egalitarianism and inclusive education: Transacting talents in all students

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#### ABSTRACT

This study aims to provide new insights into the construct of giftedness through egalitarianism and the movement of inclusive education globally. In the past, giftedness has been communicated as a person-based quality since the onset of modern gifted education. However, the essentialist thinking and reductionist practices natural to that tradition have been criticized for entrenching social gaps and promoting elitism. Based on a paradigm of talent development, some researchers have argued that giftedness can be viewed as a dynamic personal growth construct pertaining to all learners. In other words, giftedness is a process-based entity rather than person-based. By adopting this process-based construct (i.e., gift-ed), the word of giftedness can be re-conceptualized as a pedagogical goal that every individual can achieve upon realizing, developing, and optimizing their personal potentials. This reframed construct of giftedness can therefore serve as a goal for inclusive education as it encourages every student to work on a meaningful self-actualizing journey through understanding and realizing their personal strengths and developing their niche areas. This new discourse poses an enormous potential for the field to resituate the knowledge accumulated. For example, the platitude of theories of intelligences can inform teachers in the preparation of a learning environment that encourages the development of multiple forms of intelligences and dispositions. Furthermore, studies on gifted behaviors can provide insights into behavioral and social-emotional aspects of becoming "gift-ed," such as coping with failure using a growth-mindset, self-advocating for advanced learning opportunities, developing resilience and work ethics, and sustaining self-regulation. To sum up, this processbased construct of giftedness is egalitarian in nature as it reflects a strong belief that all individuals are worthy and deserve opportunities to achieve personal excellence

through proper pedagogical guidance, scaffold, and participating in a continuum of enriched educational opportunities that matches personal learning potential and needs.

## **KEYWORDS**

Giftedness, Egalitarianism, Inclusive Education, Self-Actualization, Excellence

## Talent Developmental Trajectory of Socio-economically Disadvantaged Superior Students

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#### ABSTRACT

The purpose of this study aims to investigate the talent developmental trajectory of superior students with unfavorable socioeconomic status, investigating the development of talent through the life stories of disadvantaged students. A total of 25 participants in this study participated in the Chinese Society for Gifted Education and Morgan Stanley's Bright Minds Program. Narrative interview method was administered in this study to collect data, by analyzing and summarizing them after repeated reading, so as to understand their talent development process, family environment and education process.

The results of this study are presented by two parts. The first part describes the talent development stories of different participants and describes the talent development tracks, including the events in their education and life course. In the second part, based on talent development theory and talent development level, cross-case analysis and discussion are carried out. The research findings are as follows:

- 1. The gifted students in this study are disadvantaged in social and economic status but shown their abilities in early life and precocious self-belief.
- The lack of resources in the original family of the participants also made the gifted students with unfavorable socioeconomic status feel inferior to others. Although the original family was lack of resources or suffered from blows, they still cared most about their original family.
- 3. Psychosocial skills are key to the development of disadvantaged students, and psychosocial skills can be taught.
- 4. Due to the lack of family resources, the school teachers have a significant influence on gifted students with disadvantaged social and economic status.
- Off-campus learning opportunities expand the horizons of outstanding students with disadvantaged socioeconomic status and develop more learning opportunities.

Finally, the researchers propose the following suggestions: pay attention to the

psychological and affective needs of disadvantaged students; Strengthen the school support system and long-term tracking guidance mechanism; Continue to carry out long-term follow-up research on superior students with disadvantaged socio-economic status; A focus on high-achieving students from poor backgrounds; Social resources are urgently needed.

## **KEYWORDS**

Socio-Economically Disadvantaged, Talent Development, Talent Developmental Trajectory, Bright Mind Project

# The Support Program of Elite Athlete with and without Disabilities: A Comparative Research of Taiwan and International Trends

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## ABSTRACT

Ecological perspective of career development theory which includes microsystem, mesosystem, exosystem, and macrosystem was proposed to review the regulated by Sports Administration, Ministry of Education, the 2018 Taiwan Elite Athlete Support Program (TEASP). The current content of policy provided by TEASP are both distributed to athletes with/without disabilities, and might not meet the needs of athletes with disabilities according to past studies. The purpose of this study is to: (1) compare and describe the support of athletes with/without disabilities in 2018 TEASP, (2) analyze similar programs in Japan, the United States, Australia, Canada, and United Kingdom, and (3) propose a better program which follows international trends for Taiwanese athletes with disabilities. A comparative method was used to analyze current policies. The results showed that: (1) the resources in the 2018 TEASP are not allocated and distributed equally between athletes with/without disabilities in academic, employment, and awards; (2) online-holistic education resources in the five other countries are used to design personal development in career, transition, education, and life planning for both athletes with/without disabilities equally; (3) this study proposes to establish online-holistic education resources that concern with the development of life, social needs, occupation, and physical and psychological conditions of the athletes. Based on ecological perspective of career development theory, the EASP should provide four domains of supports, including the macrosystems (e.g., social values and culture); the exosystems (e.g., educational resources and governments policy); the mesosystems (e.g., family-school and peerschool interactions) and microsystems (e.g., parents, siblings, peer, and coach). The practical implications suggest that EASP shall be revised to provide holistic education resources based on those domains for athletes with disabilities in Taiwan.

## **KEYWORDS**

Holistic Education, Elite Athletes Support Program, Career Development, Transition

# Effects of an Empowerment Training Program for Athletic Giftedness Students with Disabilities

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## ABSTRACT

The advantages of elite athletes with disabilities always are ignored by the general population because of the public's stereotype of disabilities according to the stigma theory. It affects public policies and social mainstream views, as well as their selfidentity, human rights, and career development. Taiwan Elite Athlete with Disabilities Empower Program (TEADEP) which included individualized course training, different teaching stages of speeches, experiential activities, and observation and coaching of twice-exceptional adjustment. It's implemented to promote their self-identity and social inclusion for corresponding international movements of "CRPD". Based on action research design, observation, interview, reflection, and adjustment are conducted during the implementation. Resource inventory and needs assessment was first applied, and relevant documents/records are collected for analysis. The results showed that: (1) elite student athletes with disabilities always seek their dynamic balances between "weakness of disabilities" and "strengths of athletic giftedness". Through a strengths perspective, the athletic giftedness can promote self-assurance, and self-acceptance, and use the strengths to direct their future development; (2) elite student athletes with disabilities began to participate in their sports because of their leisure activities and interests, and learned self-determination and stress management skills by sports involvements, and (3) TEADEP helped elite athlete students with disabilities to sound their life and career development. According to the stigma theory, this study concluded that TEADEP successfully established positive labels by reinforcing their "strengths of athletic giftedness" and empowered elite athletes with disabilities in their lives and career development through the programs. We also suggested that more research on developing empowerment programs and exploring the strengths of elite student athletes with disabilities are highly recommended in future studies.

## **KEYWORDS**

Athlete with Disabilities, Empowerment, Twice-Exceptional

## PSG72 Art Talent Development Through Radar Chart Assessment

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## ABSTRACT

This paper aims to explore ways in which art students can be assessed through various artistic dispositions using a carefully designed assessment Radar Chart. As we proceed further into the 21st century with heavy reliance on digital technology and mental wellness of learners, the traditional way of developing and accessing artistic talents need to be redefined.

In the process of trying to cater to the various learning needs of our visual art talents in the Art Elective Programme (AEP)<sup>1</sup>, our team produced a set of tools that help the teachers to better identify, assess and evaluate our pool of art talents. As many students in art display a spectrum of unique personalities that steer them on route to various dispositions in the journey of art, the assessment of hard skills such as drawing, painting and sculpting techniques is no longer sufficing the developmental needs of our students both mentally and academically.

The AEP introduced by the Ministry of Education (Singapore) in 1984 is designed to enable students with both academic and artistic abilities to undertake challenging art programme that aims to develop their conceptual and analytical faculties by placing equal emphasis on both the practical and theoretical aspects of Art. The programme was seeded by a vision to nurture art talents and develop art education in Singapore that will grow the artistic and creative sensibilities of Singapore. Through our method of assessment, students are encouraged to explore their thoughts, feelings and ideas through a variety of art practices and mediums, both in process and final products.

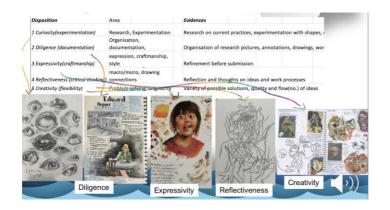
Our new assessment tool using the Radar Chart aims to assess students in 5 main areas: Creativity, Reflectiveness, Curiosity, Expressivity and Diligence, it seeks to give us 'a much better impression of individual pupil attainment and allows for suitable targeted developmental feedback'. The traditional art assessment tools often identify the art talents with ability to produce a well rendered piece of artwork, assessing only their ability to master a certain technical skill. However, our assessment aims at identifying art talents who has a creative soul, a strong mind to chart their own art dispositions and the skills to actuaries their imaginations. Though the determination of score for each criteria can be seemingly subjective, the teachers are guided by a set of visual rubrics with student exemplars to ensure each teacher's understanding of the criteria and marking is according to the benchmark set across.

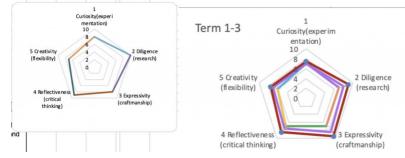
We believe that it is crucial for assessment to provide useful formative data to both each teachers and learners. Though the Radar Chart assessment tool, learners understand that the purpose of assessment is to create targeted feedback for them to

<sup>1</sup> The "Art Elective Programme (AEP)" is a national art programme in Singapore, developed to identify students with exceptional talent in art and excels in academics to go through a more in-depth and targeted Art Education during the Secondary and Junior College years. The programme was first incepted in 1984 and has since been offered by 8 Secondary/Junior Colleges in Singapore. make improvements in areas specific to their weakness. They also learn to not compare with each other as each of them forms a unique shape of radar that prove to be an artistic talent on their own.

## **KEYWORDS**

Art Talent Development, Assessment, Talent Identification





Figures showing examples of student's radar chart assessment graph and sample student works.

## **PKO80**

## Analysis of Mental Wellbeing and Mental Psychopathology of Gifted Students by Emotional and Social Developmental Process Perspective

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## ABSTRACT

A dual factor model of mental wellbeing & mental psychopathology on parental psychological environments associated with perceived giftedness phase, character, and educational fit of gifted students were examined in this study. A psychometrical survey instrument was used to collect data from 131 Korean gifted students of 11-15 ages(*M*=13.85). Data was analyzed using structural equation modeling by MPlus8.3. The results model suggested that mental psychopathology on parental psychological environments had statistically significant total indirect negative effects mediated by mental wellbeing, perceived giftedness phase, character, and educational fit. The findings will be used to prevent mental psychopathology & improve mental wellbeing, & character of gifted students.

## **KEYWORDS**

Gifted Students, Perceived Giftedness Phase, Mental Wellbeing, Mental Psychopathology, Character, Educational Fit, Parental Psychological Environment

## Adolescent Leadership in Taiwan: Exploring the Relationship among Multiple Assessments and Their Predictor Variables

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## ABSTRACT

Studies on adolescent leadership in Taiwan are scant. For this study, we assessed adolescent leadership by combining subjective performance-based assessments (self-assessed leadership, peer-nominated leadership, teacher-observed leadership, and parent-observed leadership) with an objective, constructed-response test (objectively assessed leadership). Afterward, we explored the effects of certain variables that might act as predictors of adolescent leadership. We recruited 174 eighth-grade students (44.8% were boys, and 41.4% were gifted students talented in music, the arts, dance, mathematics, and science) in the northern region of Taiwan. The results of correlation analysis and multiple hierarchical regression analysis revealed that adolescent leadership from different perspectives might be correlated with each other. Moreover, academic achievement, leadership traits, gender, leadership experience, and gifted eligibility might be variables that are critical for predicting adolescent's leadership levels according to multiple assessments.

## **KEYWORDS**

Adolescent Leadership, Constructed-Response Test, Giftedness and Talents in Leadership, Multiple Assessments, Performance-Based Assessments, Predictors for Leaderships

## The Construction Research of the Multiple Perfectionism Scale for Elementary School Students

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## ABSTRACT

The purpose of the study tried to construct the multiple perfectionism scale for elementary school students, especially for gifted students. There were 216 regular students from three to sixth grades in the pilot study, and 908 gifted students from three to sixth grade in the formal study. The multiple perfectionism scale was based on Big Three Perfectionism Scale (Smith, 2016), and mainly referenced the Measure of Constructs Underlying Perfectionism (Tairs, Smith, Zapolski, Combs, & Settles, 2012), the Korean version of the Perfectionism Inventory (Yoon & Han, 2015), and other perfectionism scales. The multiple perfectionism scale contained 18 perfectionism facets with 130 items, which make up four distinct primary factors labeled rigid, self-critical, narcissistic, and ego-syntonic perfectionism. Rigid perfectionism contained the facets of self-oriented perfectionism, self-worth contingencies, and black and white thinking. Self-critical perfectionism included the facets of concern over mistakes, doubts about actions, self-criticism, dissatisfaction, socially prescribed perfectionism, and perceived parental pressure. Narcissistic perfectionism was comprised of the facets of other-oriented perfectionism, hypercriticism, entitlement, and grandiosity. Ego-syntonic perfectionism consisted of the facets of order, high standards, details and checking, planning, and satisfaction. The data was analyzed by item analysis, exploratory factor analysis, and confirmative factor analysis. In conclusion, there were was four higher factors consisting of 14 factor-structure with 47 items by confirmative factor analysis. The reliability and validity of the scale were accepted.

## **KEYWORDS**

Perfectionism, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Gifted Student

Discussing the Mechanism of Artistic Ability Identification of Disability Students in Taiwan Based on the Identification Rate of Twice-Exceptional Students

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#### ABSTRACT

In 2019, Twice-exceptional students in Taiwan accounted for 0.40% of all students with disabilities. (Ministry of Education Special Education Bulletin), compared with Australia, Western Australia has 1.6% of gifted students with disabilities (Ivicevic, 2017); American (Shaunessy & Bisland,2004) accounts for 3% to 5% of the total disabled population (National and Pre-school Administration of the Ministry of Education), it can be seen that the identification rate of gifted students with disabilities in Taiwan is much lower than that of the United States and Western Australia.

In terms of the identification rate of students with both physical and mental disabilities who have artistic talents, in the 2020 academic year, there were 184 students with physical and mental disabilities enrolled in art classes, accounting for 1.2% of all students enrolled in art classes. Among them, learning disabilities accounted for 4.2%, followed by autism, accounting for 2.5%, and Cerebral Palsy, developmental retardation, multiple disabilities, intellectual disabilities, and visual disabilities were the least (provided by the education bureau of each county and city government).

Regarding the identification of students with dual differences, Guo Jingzi (2010) proposed a three-stage multiple identification model for academic aptitude, and Zhang Yupei (2008) also proposed three-stage identification procedures and methods. Liang Feiyu (2017) proposed a multi-stage appraisal and re-evaluation model. If you do not adapt to the placement in the third stage, you can go back to the second stage for re-evaluation.

This paper is expected to explore the identification mechanism of artistic talents of Taiwanese students with disabilities, compare the multi-stage identification mode of American art gifted students, and propose a suitable multi-level identification mode.

The contributions of this paper are as follows:

1. Analyze the limitations of the current art talent identification mechanism for students with disabilities.

2. Propose a multiple identification model suitable for the current situation in Taiwan.

3. Improve the pass rate of gifted students with artistic talents for students with disabilities.

## **KEYWORDS**

Twice-Exceptional Students, Artistic Talents, Identification, Multivariate Assessment

# The Psychological Adjustment Experience of Canadian Gifted Students in Participating Accelerated Education

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## ABSTRACT

Overexcitabilities, or OE, explains that gifted students are more active in certain aspects of personality than students without special needs. Theory of Positive Disintegration, TPD pointed out that the characteristics of asynchronous development, combined with the unique development of their advanced cognitive abilities, may cause gifted students to be vulnerable to psychological adaptation. Research shows that half of the gifted teens feel that their concerns are not understood, especially those related to their gifts (eg, Asynchronous development, OE, motivation...).

The subjects of the study were 12 students, aged between 15 to 16, who participated in the University Transition Program (UTP), a cooperation between the Vancouver Board of Education and the University of British Columbia (UBC). They had to complete a five-year secondary school program within two years. The Enhanced Critical Incident Technique (ECIT) was adopted. Observations and in-depth interview methods were used to collect data. The purpose of the research was to understand the key factors that affect the gifted students in accelerated UTP learning and psychological adaptation during the two years.

15 types of beneficial events and 9 types of obstructing events were extracted from the data and were further divided into four categories. Inner process (Area I): When feeling stressed about skipping grades, accelerated students with enough motivation were able to make good use of self-adjusting learning strategies.

Family factors: (Area II) family atmosphere and parents' educational backgrounds have significant impacts on gifted students' academic assistance and career planning. School environment (Area III) The advantages of UTP was that it saved time and took care of each gifted student since there's a small amount of them.

Social environment/resource (Area IV): cultural impacts from different countries diluted the persistence in academic performance.

Five recommendations were stated.

First, school counselors must understand the characteristics and psychological needs of gifted students to assist gifted students with healthy psychological adjustment effectively. Second, assist gifted students to understand their strengths and traits. Third, establishing a correct concept of gifted education for parents and parent support groups is needed. Fourth, when planning accelerated courses, attention should be paid to the special needs caused by the shortening of time. Lastly, the social environment should focus on the special needs of gifted students, and provide them with the most suitable placements.

## **KEYWORDS**

Gifted Students, Accelerated Education, Psychological Adaptation, Gifted Counseling, School Counselor

#### PCH41

## Research on the Development of Geography Curriculum to Help Gifted Children's Geography Learning

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### ABSTRACT

This study aims to develop a practical geography curriculum that pays attention to the observation and exploration of living environment and improves the practical learning ability of gifted children in geography. Based on the characteristics of gifted children's comprehensive learning ability and strong exploration desire for geography, and based on the constructivist learning theory, breaking through the limitations of traditional geography curriculum in the limited space within classroom, a series of thematic outdoor geography practical curriculum have been developed and constructed. Taking nanhucheng River, Xihai Park and Tonghui River as examples, this curriculum illustrated the relationship between the development history of Beijing city and the river, and implemented the curriculum standard to "explain the role of rivers and lakes in the development of Beijing". Teachers used Beijing's rich natural and cultural resources to develop themed outdoor Curriculum. Combining with the outdoor natural physical education class of half a day a week, students used their knowledge to observe and analyze the natural environment and development changes of their hometown in real social life while doing outdoor exercises, and afterwards made a presentation to show the theme and analyze problems through group cooperation. The results showed that this series of curriculum were loved by students, significantly stimulated students' interest in learning, improved students' ability to observe and understand the relationship between people and land, enhanced their sense of social responsibility, and finally improved students' practical learning ability of geography.

#### **KEYWORDS**

Gifted Education; Practical Ability of Geography; Curriculum Development

### PKO131

# Comparison of teacher and student perceptions of mentoring programs for the underprivileged

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## ABSTRACT

For gifted education, various mentoring programs operated in addition to academics for the underprivileged students, and it is important to provide the mentoring program that students want. In this study, the importance and performance of 11 mentoring programs were analyzed to find out the perception of teachers and students about the mentoring program for the underprivileged. For this purpose, 315 teachers and 352 students(grade 4~12) participated in the survey. The customized mentoring programs for the underprivileged are orientation, camp, counseling, academic counseling, cultural experience, online learning mentoring, career experience learning, peer mentoring, expert mentoring, communicator program, and teacher self-development programs. From the the analysis, we found that the degree of teachers' cognition of the importance of the mentoring program is orientation, academic counseling, and cultural experience in turn. While from students' perspectives, the importance of the mentoring program is career experience learning, and expert mentoring in turn. In the six mentoring programs, there was a difference in the perceptions of the actual performance level of teachers and students. Teachers perceived high performance in the order of orientation, academic counseling, career experience mentoring, and teacher self-development programs, while students perceived high performance in the order of orientation, camp, career experience learning, expert mentoring, and teacher self-development programs. The results showed that the perceptions of the importance and performance of the mentoring program are different among students and teachers. Students generally perceive career mentoring as important, so it was necessary to organize various career mentoring according to the school level when operating the mentoring program. Through the above results, it is necessary to support students' emotional stability and career design by strengthening career and emotional mentoring along with academic mentoring for underprivileged students.

#### **KEYWORDS**

Underprivileged, Gifted Education, Mentoring Program

## Exploring the Effectiveness of a Teacher-Designed, Interdisciplinary Learning Activity on Soil Biology and Scientific Illustration

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## ABSTRACT

The current study presents (1) the development of interdisciplinary instructional unit that highlights the scientific observation and illustration of soil microbiology, as well as (2) evaluating the effectiveness of the instructional unit. The current study took the following steps:

An interdisciplinary team was formed by teachers from three areas, Gifted Education, Nature and Sciences Education, and Arts and Humanity Education, to develop teaching materials for the project. The materials developed include observational and sampling methods of soil microsystems, bioassay, and soil scientific illustration. Twelve 11-grade gifted students from two different elementary schools in Changhua County were invited to participate in the learning project. Led by gifted education teachers from each school, the students from each school went to several locations near their schools to collect soil, sample microorganisms, and conduct microscopy via smartphones. The students from two schools were then gathered and shared and discussed the information they had accumulated from their field study. Guided by teachers, the students were instructed to carefully formulate hypotheses about the casual relationships between the environmental conditions and the different soil microsystems based on the information they have had collected.

As a result, the current study yielded the following output:

A package of teaching materials for an interdisciplinary learning activity focusing on soil science and surveys.

A map of the microorganisms observed in the soil in different locations in Changhua County.

A children's picture book featuring the soil biology and the process of scientific observation on soil.

A project-end conference that allowed the students to showcase the results and artifacts from their independent studies.

Overall, the researchers found the interdisciplinary leaning activity conducive to gifted students' science learning. Positive effects were shown in the improvement of scientific knowledge, skills, and attitudes.

## **KEYWORDS**

Interdisciplinary Learning Activity, Scientific Illustration, Scientific Observation

## The Study on the Course Quality of Independent Research in Taipei City's Elementary Gifted Education

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### ABSTRACT

This study aims at discussing the teaching quality of Taipei City's elementary gifted class teachers in independent researching courses. It employed Survey Research. The learning performance of "Independent Research" in the Curriculum Guidelines of 12 Year Basic Education-courses in the special needs domain was taken as the indicators. The objects are current elementary gifted class teachers in Taipei City. 50 valid samples were collected with 100% response rate. The data were analyzed with mean, sigma and Importance-Performance Analysis. The results are:

1. The importance order is research attitude, research concept and thinking ability, independent research skills.

2. "Keep going" indicators is more than "the priority of improvement" indicators. Based on the results, the suggestions are:

1. Regarding research attitude, teachers can aim more at guiding and teaching: "Students can understand the meaning of independent research, the experience and the important values by carrying out such practice." "Students can comprehend fellows' reports and further raise relevant questions, give opinions and constructive suggestions." "Gifted students can actively participate in the researching activities and are happy to discuss, share and accept others' feedback." "Students can take the challenges during the research, keep their morale and persistence of the research motivations, keep doing their independent research and fulfill their commitment on research."

2. About "Research concept and thinking ability", teachers can focus on "Students can hold reasonable skeptical attitude and give their opinions, explanation, examples to their collected references and data based on their knowledge in that field.", "Students can often think about and raise questions on unsolved problems.

3. With "Independent research skills", teachers can reinforce " students can plan projects and keep to schedules according to the research and resources" and "students can solve problems or discover new problems from acquired information and data."

## **KEYWORDS**

Independent Research, Course Implementation

#### PCA115

## Effectiveness of Group Counseling on Enhancing Communication Skills and Self-Esteem in Gifted Students

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#### ABSTRACT

Self-esteem is a primary determinant of academic achievement and communication skills are the main determining factor for the academic achievement of children in the classroom. Both of them are needed for children to achieve their academic goals. A number of studies show that because of individual differences with other students and also not paying attention to classes' rules, they are blamed by the environment, hence usually they have low self-esteem and have difficulty in communication skills. Research Objective: The study is aimed at investigating the effectiveness of group counseling on improving self-esteem and communication skills in gifted students. Method: The sample group was selected from third- to fifth-grade students in primary public schools with a Wechsler's IQ score above 130. 54 participants were randomly assigned to an experimental group (26 participate) and a control group (28 participate). Communication Skills Questionnaire (CSQ) and Coopersmith Self-Esteem Inventory (CSEI) were used for both pre-test and post-test. The intervention was comprised of twelve sessions of interactive group activities (two sessions per week). In addition, the intervention also consisted of some group counseling techniques, including unconditional acceptance in the group, positive reinforcement, teaching positive thinking, strength-discovery, attending the problem-solving program, assigning homework in the family environment, and engaging parents in conversation with each other in the group. Findings showed general effectiveness of group counseling. Statistical significance was found in differences between pre-test and post-test across all CSQ and CSEI dimensions in the experimental group. The study shows that group activities, problem-solving programs, and positive thinking can enhance self-esteem and communication skills among gifted students. For future studies, we recommend observing the effects of group counseling and individual.

#### **KEYWORDS**

Gifted students, Group Counseling, Giftedness, Self-Esteem, Communication Skills

### **PKO164**

The Effect of Children's Peer Play Interaction on Elementary School Students' Academic Performance: Academic Ability and School Adjustment as Mediating Factors

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### ABSTRACT

This study examines the mediating effect of school adjustment on the relationship between children's peer play interaction on elementary school students' academic performance.

For this purpose, data from the KOREA Institute of Child Care and Education(KICCE)'s seventh(2014), eighth(2015), and tenth(2017) Panel Study on Korean Children(PSKC) was used.

Data from a total of 438 children was analyzed using Process Marco(Model 6).

The results of the study were as follows. First, children's peer play interaction showed a significant positive correlation with school adaptation. Second, the ability to adjust to school well had an effect on children's academic performance. Third, it was confirmed that children with positive peer play interaction adjusted to school well, which had an impact on academic performance.

This study has implications to parents, who only emphasize the learning aspect of nurturing gifted children from infancy, that positive interaction through peer play can result in children who enjoy school and have high academic achievement.

In particular, during these last few years when pandemics such as COVID-19 kept everyone secluded, our children have missed peer play.

Hence we must explore ways to implement peer play to restore the peer relationships.

#### **KEYWORDS**

Peer Play Interaction, Academic Ability, School Adjustment, Academic Performance, Sequential Mediational Model

## Concerns about 12-Year Basic Education Competency-Based Curriculum Implementation of Teachers for the Gifted

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#### ABSTRACT

12-Year Basic Education is a curriculum reform focusing on competency-based curriculum in Taiwan. The discourse and praxis of competency-based curriculum could be a catalyst that evokes teachers for the gifted to reflect on as well as to reconstruct the identity of gifted education. However, we know relatively little about teacher concerns regarding competency-based curriculum implementation for the gifted. The aim of this current study is to investigate the stages and types of concerns about 12-Year Basic Education competency-based curriculum implementation of teachers for the gifted. The Concerns-Based Adoption Model (CBAM) was deliberately used to investigate the development of teacher concerns about competency-based curriculum implementation. CBAM draws on adoption of innovation as a characteristic stage of concerns: (0) awareness; (1) information; (2) personal; (3) management; (4) consequence; (5) collaboration; and (6) refocusing. In response to the curriculum reform of 12-Year Basic Education, pilot schools were selected to promote and implement competency-based gifted curriculum. According to CBAM, the "Questionnaire of 12-Year Basic Education Competency-Based Curriculum Current Implementation of Teachers for the Gifted" was employed to investigate concerns of 180 teachers at the competency-based gifted curriculum pilot schools. Data were analyzed by the statistical methods of frequency, cluster analysis, ANOVA, and the kai-square test. The findings indicated that most teachers had high concerns about how to implement competency-based curriculum for the gifted. Teacher concerns fell into three relatively well-defined stages: the consequence concern (stage 4), collaboration (stage 5), and personal (stage 2). In addition, teacher concerns about competency-based curriculum implementation for the gifted were clustered into three types. Each type consisted of its own characteristics and the developmental stages of concern. Recommendations for practice and future study in terms of competency-based curriculum implementation are also provided based on the findings.

#### **KEYWORDS**

Competency-Based Curriculum, Teachers for The Gifted, Stage of Concern, Concerns-Based Adoption Model (CBAM)2592-Year Basic Education

# A Study on Gifted Students' Learning Need and Learning Satisfaction in Junior High Schools

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## ABSTRACT

This research mainly explores gifted students' learning needs and learning satisfaction in the curriculum adjustment of gifted courses in junior high schools, and compiled the questionnaire survey on the learning needs and satisfaction of gifted students. This study adopts the random sampling and selects academic gifted students, 755 participants in total, from the six metropolis and then analyzes them according to their gender, type and grade of background variables. The conclusions obtained are summarized as follows:

A. Current status of learning needs and learning satisfaction of gifted students The overall high need and high satisfaction of the gifted students in the junior high schools.

- B. Differences in learning needs and satisfaction of gifted students
  - (a) There is no gender difference in learning needs and learning satisfaction among gifted students.
  - (b) There are significant differences of different types in learning needs and learning satisfaction among gifted students.
  - (c) There are significant differences of different grades in learning needs and learning satisfaction among gifted students.
- C. The relevant situation of the learning needs and learning satisfaction of gifted students.

Gifted students show a positive correlation between learning needs and learning satisfaction.

D. The predictive power of learning needs on learning satisfaction in curriculum adjustment

The learning needs of "learning content" and "learning assessment" in curriculum adjustment have a higher predictive power on learning satisfaction.

E. The relationship between the learning needs and learning satisfaction of gifted students in curriculum adjustment

In terms of "learning content", "learning process", "learning environment", and "learning assessment", gifted students show high needs and high satisfaction in the relationship. However, among four aspects, the number of gifted students outnumbers the other three, due to "learning assessment" shows the lower learning needs and learning satisfaction in the relationship.

#### **KEYWORDS**

Curriculum Guidelines of 12-Year Basic Education, Curriculum Adjustment, Gifted Student in Junior High School, Learning Need, Learning Satisfaction

The Preliminary Practices on Seligman's Happiness Course: Studies on Its Implementation and Effectiveness for Junior-high Language Gifted Students

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### ABSTRACT

Pursuing well-being and happiness is a universal desire. With the efforts of many scholars, some concrete principles for pursuing well-being and happiness have been recognized. Since 2004, courses teaching how to obtain happiness have been offered to learners of different learning stages in many western countries, which illustrates the pursuit of happiness is the fundamental needs for people of all ages. According to Seligman's PERMA theory, Positive emotion, Engagement, Meaning, Accomplishment, and Relationship, are five building blocks that enable flourishing and well-being. Influenced by Seligman's Positive Psychology, Renzulli, a renowned scholar in the field of gifted education, also regards the idea of pursuing well-being as one of the co-cognitive attributes of gifted pupils, indicating its importance to gifted pupils.

Given these, a happiness course was therefore designed for three 8<sup>th</sup> graders with language gifts with reference to both Seligman's PERMA theory and Ian Morris' happiness curriculum model. In this eight-week project-based course, learners went through three learning phases of noticing, acting, and reflecting. Firstly, they read and learned how to positively interact with others. Secondly, they basked themselves in the positive interaction by interviewing subjects from family and other communities. Lastly, they did reflective writing to present their feelings. With these processes, participants were to construct happiness from personal to family and social levels. The effectiveness of the course was evaluated though analyzing the texts of participants' reflective writing. Results showed that three elements, Meaning, Positive emotion and Engagement, were experienced in the reading phase. In the acting phase, participants presented all the five characteristics of the PERMA theory. In the last writing and reflection phase, Positive emotion, Engagement, Meaning and Accomplishment were the four acquired elements. Based on the participants' feedbacks, it was therefore concluded that courses teaching learners how to build happiness can and should be offered in schools.

## **KEYWORDS**

Happiness Courses, Seligman's PERMA Theory, Gifted Education

# Factor Structure of Overexcitabilities Questionnaire for Students in Elementary School: Focusing on Exploratory Factor Analysis

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## ABSTRACT

The purpose of the study is to verify, by factor analysis, the factor structure of the Overexcitabilities Questionnaire (The Me Scale II) in Taiwan elementary school students. A questionnaire is used as the main tool in this research. Participants were 680 students of primary school students, who completed 'The Me Scale II'. By exploratory factor analysis of student data showed a better fit for a five-factor model of psychomotor(POE)  $\cdot$  sensual (SOE)  $\cdot$  intellectual(TOE)  $\cdot$  imaginational(MOE)  $\cdot$  emotional(EOE), a factor structure in accordance with the Dabrowski taxonomy. Finally, according to the results of the study, recommendations were made for education and further research.

## **KEYWORDS**

Overexcitablilities, Elementary School, Factor Analysis

### PCH39

## A Practical Research on Designing Group Psychological Counseling for Gifted Children with ARCS Model

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### ABSTRACT

This study aims at the gossip behavior adjustment caused by the curiosity and impulse to the opposite sex in the initial stage of puberty of gifted children. It uses ARCS model to design and carry out group psychological counseling to help students correctly deal with gossip behavior and develop appropriate interaction and communication. Firstly, arousing the "attention" of students through comics. Secondly, relating the gossip to students' actual life through the gossip radio hotline. Thirdly, through the practice of psychodrama to solve problems and gain confidence. Finally, generating the 3S (Silent/Stop/Smile) rule for dealing with gossip through theoretical sublimation for the satisfaction of students. Research shows that the use of ARCS model to design group psychological counseling for gifted children at puberty can help students better understand themselves and others, communicate with peers in a reasonable way, effectively solve the troubles caused by gossip, and enjoy adolescent period.

#### **KEYWORDS**

Gossip; Puberty; Group Psychological Counseling; ARCS Model

## PCH42 Physics Curriculum Compacting in Gifted Education

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## ABSTRACT

One of the most important strategies of acceleration of gifted children is curriculum compacting. In physics teaching, how to face the actual situation of short time, dense knowledge, great difficulty and mismatched mathematical knowledge reserve to help gifted children complete the five-year middle school physics curriculum for ordinary students within four years needs creative integration from the aspects of teaching content, teaching depth and teaching strategies. At present, there are few ready-made and suitable experience and research in this field at home and abroad. This paper mainly carried out practical research in the integration of physics curriculum for gifted children, including the integration of physics knowledge in junior and senior high schools, the integration of teaching plan and teaching progress, the integration of physics and mathematics knowledge, and implementation cases. In the teaching process, the content of junior middle school would be fragmented and integrated into the knowledge of senior high school; the knowledge points of force, light, heat and electricity of physics in junior high school and senior high school would be taught uniformly, and physics experiment week was set to mobilize students' learning enthusiasm. Finally, in practice, helping students to effectively complete the curriculum of physics in a shorter period and improve their core ability in physics learning would be concluded.

## **KEYWORDS**

Gifted Children; Physics Teaching; Curriculum Compacting

### PKO59

## What is the Effect of Self-Determination on Creativity of Early Childhood Teachers? Does Failure Tolerance Make a Difference?

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## ABSTRACT

The purpose of this study was to investigate the effects of self-determination of early childhood teachers on teacher creativity and to verify the mediating effect of failure tolerance in this process. It is hypothesized that teachers who have high self-determination would willingly experience various challenges and failures and demonstrate creativity. According to these research objectives, the following research questions were raised. First, how does self-determination of teachers affect teacher creativity? Second, how does teacher failure tolerance affect teacher creativity? Third, does failure tolerance function as a mediating factor between self-determination and creativity of teachers?

For the purpose of this study, 100 teachers of kindergartens and child care centers located in Seoul and Gyeonggi-do, Korea, were selected as research subjects to investigate the above research problem, and the teachers' creativity, self-determination, and failure tolerance were measured. To measure the creativity of teachers, Runco's Runco Ideational Behavior Scale (RIBS) was adapted and modified by Kyungbin Park (2019) using the 'Korean version of the 'Creative Ideation Scale'. To measure self-determination, Ilardi, Leone, Kasser's The Basic Need Satisfaction at Work Scale which was modified by Shin Eun-jung (2016) was used. Finally, to measure teachers' failure tolerance, the adult failure tolerance scale developed by Ayoung Kim (2018) was used. To verify the hypothesis of this study, the data collected through the questionnaire were analyzed using the SPSS 21.0 program.

The results of this study are as follows. First, self-determination was found to have a positive correlation with the creativity of early childhood teachers. Second, failure tolerance was found to have a large effect on teachers' creativity. Third, self-

determination was found to have a positive effect on teachers' creativity, and failure tolerance had a mediating effect. The results of this study indicated that selfdetermination had a direct effect on the creativity of early childhood teachers. It also showed that self-determination had an indirect influence through failure tolerance as a mediating variable. For early childhood teachers to improve creativity, teachers should try to increase their failure tolerance and enhance self-determined attitude. This kind of teacher attitude would contribute to improving the overall quality of early childhood education. Also, it is suggested that the director of early childhood education institutions and local government officials should provide an environment that supports autonomy for teachers.

#### **KEYWORDS**

Creativity, Self-Determination, Failure Tolerance

## **PKO113**

## The Mediating Effect of Self-Directed Learning Ability on the Relationship between Creative School Environment and Future Creative Confluence Competency

Ju-Sung Jun<sup>1\*</sup>, Kyung-Hwa Lee<sup>2</sup> <sup>12</sup> Department of Lifelong Education, Soongsil University, South Korea

\*Corresponding author, e-mail: jnet@ssu.ac.kr

## ABSTRACT

Future creative confluence competency is being emphasized as an essential competency to adapt well to the future society. Future creative confluence competency is defined as a psychological resource that includes future talents' characteristics by integrating creative capability and confluence capability that can actively respond to various situations in the rapidly changing future society. The purpose of this study is to investigate the mediating effect of self-directed learning ability on the relationship between creative school environment and future creative confluence competency perceived by college students in South Korea. Research data were collected from 358 college students at University A in Seoul, South Korea in December 2021 using an online survey tool. Data analysis was performed using Hayes (2022)'s Process Macro (Model 4). The main research results are as follows: First, self-directed learning ability partially mediated the relationship between creative school environment and future creative confluence competency. Second, excluding behavior among the sub-variables of self-directed learning ability, only cognitive and affection variables partially mediated the relationship between creative school environment and future creative confluence competency. The results of this study imply that future creative confluence competency can be improved by creating a creative school environment and providing various interventions to enhance the self-directed learning ability of college students.

## **KEYWORDS**

Creative School Environment, Future Creative Confluence Competency, Self-Directed Learning Ability, Mediating Effect

## A Correlational Study on Creative Aptitude, Creative Environment, and Independent Study Capabilities Among Grades 5-6 Gifted Students

Shih-Chi Kung<sup>1</sup>, Chen-Ming Chen<sup>2</sup>, Chih-Shen Lo<sup>3</sup>, Kuei-Fang Tsai<sup>4\*</sup>

<sup>1</sup> Nanyang Elementary School

- <sup>2</sup> Department of Special Education, National Kaohsiung Normal University
- <sup>3</sup> Educational and Counselling Psychology, and Special Education, The University of British Columbia
- <sup>4</sup> Department of Child Care and Education, Hungkuang University

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## ABSTRACT

The purpose of this study was to explore the relationship among the creative tendency, creative environment feelings and independent study ability of high grade gifted students in elementary school.

A total of 200 questionnaires were collected in this study. The data were analyzed by statistical methods such as descriptive statistics, MONOVA, correlation and multiple regression analysis. The results are revealed as follows:

1. The intelligent students in elementary have positive feelings in creative tendency, creative environment feeling and independent research ability

2. Regions in background variables have significant differences in creative tendencies and independent study capabilities. There are no significant differences in creative environment perceptions

3. There is a significant correlation between creative tendency and creative environment feeling. And it is moderate positive correlation.

4. There is a significant correlation between creative tendency and independent study ability. And it is moderate positive correlation.

5. There is a significant correlation between independent research ability and creative environment feeling. And it is moderate positive correlation.

6. Creative tendencies and creative environment feelings have predictive power for independent study on intelligent students in elementary schools.

Finally, based on the conclusion, the present study proposed some suggestions for the Bureau of Education, special education teachers in elementary school, and future studies.

## **KEYWORDS**

Creative Tendency, Creative Environment Feelings, Independent Study

## An Exploratory Study of Gifted Students' Scientific Learning Attitudes through Making Natural Environment Models.

#### Hung-Lun Pan

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### ABSTRACT

This research uses semi-structured interviews, questionnaires, and file records to explore the learning attitudes of 24 grade 5 gifted students in science and technology courses through making natural environment model.

The findings are summarized as follows:

1) Gifted students prefer to practice and operate their natural environment model rather than acquire knowledge from books.

2) They believe that making models can increase their motivation to learn about environment, and also help improve scientific knowledge.

3) 60% of gifted students do not feel that modeling makes them troublesome.

4) During the process, students believe that the most important ability to complete excellent works is creativity, followed by observation, and finally natural background knowledge.

5) 30% of the gifted students do not think that they have encountered difficulties or need assistance during the production process.

After the model was completed, it was also found that

6) 40% of the students did not trust their abilities at the beginning and felt that they could not complete a satisfactory work. After the work was completed, 75% of the students felt satisfy about their models. Which means that many students underestimate their abilities.

7) Although such a high proportion of students are satisfied with their works, only half of the students are willing to share their models with others.

The results of this study could be a reference for gifted educators in teaching and guidance.

## **KEYWORDS**

Scientific Learning, Model-Making, Gifted Education

### PCA108

## Improving Underachievement among Underachieving Students by Executive-Functions Based Cognitive Empowerment Training

#### Hanieh Yavari<sup>1\*</sup>, C. Owen Lo<sup>2</sup>

<sup>12</sup> Department of Educational and Counselling Psychology, & Special Education, the University of British Columbia

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#### ABSTRACT

**Aim**: The aim of this research was to develop and validate a cognitive empowerment training package based on executive functions and evaluate its effectiveness on improving the neuropsychological skills of underachieving gifted students. Underachievement among gifted students can be regarded as an issue in social capital as they may not maximize their contribution to our societies. It also invites possibilities of mental and socioemotional comorbidities among these high-potential students.

**Method**: The study adopted an experimental method with a pre-test and post-test design with a control group. Thirty underachieving gifted students (12 years old) from 5 elementary schools in Tehran were selected by the available sampling method. The participants were randomly assigned to experimental (n = 15) and control (n = 15) groups. The control group received 10 weekly 60-minute sessions of the Cognitive Empowerment Training (CET) package. The including criteria for participants were: (1) have an IQ score equal to or greater than 120 in WISC-V, (2) evidence of lacking appropriate academic achievement (through interviews with their teacher and parents, and examining their background and academic transcript), (3) no diagnose of any other psychological deficiencies, (4) didn't participate in any other psychological or educational interventions at the same time. EFs were assessed with the Behavior Rating Inventory of Executive Function, Second Edition (BRIEF2,2015) The data was analyzing by the ANCOVA.

**Results**: Analyses of Covariance revealed that there were significant improvements in CET group the in most aspects of executive functions (p<0.001), compared with the control group after the intervention.

**Conclusions**: These findings suggest that a CET program may have positive implications for neuropsychological functioning and may provide preliminary support for alternative therapeutic interventions for use in underachieving gifted students in Iran.

#### **KEYWORDS**

Underachieving Gifted Students, Cognitive Empowerment, Executive Functions, BRIEF2

#### PKO125

#### The Effect of Social Support on Teaching Efficacy about Play in Teachers of Early Childhood Education: Investigating the Mediating Effect of Ideation

#### **Kyoung-Sook Kim<sup>1</sup>\***, Kyungbin Park<sup>2</sup>

<sup>12</sup> Gachon University

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#### ABSTRACT

The abilities of teachers of early childhood education are affected by social support and social relationships in that these factors improve the resilience of teachers by developing adaptability and positive coping skills in stressful situations (J. Lee, 2012, J. Kim, Y. Lee, D. Kim, 2014, Y., 2019, Y. Choi, H. Lee, 2022).

In addition, teachers' self-efficacy, namely teachers' beliefs in their ability to effectively handle the tasks, obligations, and challenges related to their professional activity, plays a key role in influencing important outcomes in students' and teachers' well-being in the working environment.

Teacher efficacy is a variable that explains the difference in teachers' teaching ability, which is closely related to teaching behavior. This acts as a major variable influencing play management, which is important for child development and the academic achievement of students (S. Shin et al., 2004).

Also, teacher efficacy plays an important role in developing children's creativity, and the higher the teacher's creativity level, the higher the child's creativity (Marks, 1989; Tafuri, 1994). Teachers plan and implement appropriate educational activities to promote children's creativity (S. Kim, B. Moon, 2015). In particular, creative ideation is a basic factor that occurs in the creative thinking process (Runco et al., 2001: K.Park, 2019), and teachers who have a lot of creative ideas have a high belief in their play guidance ability (E. Park, H. Park, 2018).

Therefore, the purpose of this study was to examine the effect of social support on teachers' teaching efficacy about play and to investigate whether teacher ideation plays a mediating role for teachers in early childhood education. The research questions are as follows.

1. What is the relationship between social support, teacher ideation, and teaching efficacy about play in teachers of early childhood education?

2. Does ideation mediate the effect of social support on teaching efficacy about play?

For this purpose, SEM structural model analysis was conducted based on the data of 622 early childhood teachers in Seoul, Gyeonggi Province, and Incheon, Korea. As an analysis method, technical statistics, reliability analysis, and correlations were measured, and in order to verify the measurement model, the correlation between suitability, factor load, and latent variables was obtained and confirmatory factor analysis was conducted. The significance of the indirect effect was confirmed by bootstrapping.

The results of this study are as follows:

First, it was found that social support had a positive effect on teacher ideation and teaching efficacy on play in early childhood teachers.

Second, ideation was found to have a positive effect on teaching efficacy about play.

Third, the ideation variable was found to mediate the relationship between social support and teaching efficacy about play for early childhood teachers.

In conclusion, this study presented implications for the positive effects of social support, teacher ideation, and teaching efficacy about play in early childhood teachers.

### **KEYWORDS**

Social Support, Early Childhood Teacher, Ideation, Teaching Efficacy About Play

#### PKO126

## The Effect of Ideation on Happiness for Teachers in Early Childhood Education: Focused on the Mediating Effect of Efficacy of Teaching Play

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<sup>12</sup> Gachon University <sup>3</sup>JEI University

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## ABSTRACT

All humans have the right to be happy. Teachers' happiness in early childhood education is important because it affects the happiness of children who spend a long time with the teachers (M. Kim, 2016). Happiness enables teachers to be more creative when teaching children and gives them a sense of efficacy (K. Koo, S. Kim, 2013). Early childhood is a crucial period in the development of creativity, and research shows that the happier the teachers are, the more creative the implementation of teaching strategies is. Teachers were found to have a higher level of happiness when implementing creative teaching activities (M. Kim, S. Lee, H. Hwang, 2016). One useful method for investigating teachers' creativity is looking at creative ideation. People who have higher scores in ideation were found to be more creative. Another factor to consider is teaching efficacy about play, because the revised Nuri course and the 4th standard childcare curriculum in Korea (H. Hong, 2021) emphasizes play for young children, hence the importance of a teacher's ability to teach the play.

In short, recognizing the importance of ideation in teachers of early childhood education, the efficacy of teaching play, and happiness are important components for educators to consider as they establish a positive teaching experience. The purpose of this study was to examine the relationship between ideation and happiness for teachers in early childhood education and to determine if there was a mediating effect on the efficacy of teaching play.

For data analysis, SPSS22.0 and AMOS 21.0 programs were used. The data of 622 early childhood teachers in Seoul and Gyeonggi Province in Korea were collected, and SEM structural model analysis was conducted. Results showed that ideation had a positive effect on happiness and efficacy of teaching play for early childhood teachers. Also, the efficacy of teaching play had a positive effect on teacher happiness. Moreover, it was confirmed that early childhood teachers' efficacy in teaching play had a mediating effect on the relationship between ideation and

teacher happiness. Implications of the results of this study will be discussed, such as methods for enhancing teacher happiness in the workplace and how to improve teacher creativity and teaching play to young children.

## **KEYWORDS**

Ideas of early childhood teachers, sense of play teaching efficacy, happiness.

## An Exploration and Preliminary Evaluation of School-Based Compassionate Mind Cultivation(SBCMC) for Gifted Students in Junior High School

#### **Chih-Hsuan Chang\***

Graduate Institute of Education, National Taiwan Ocean University

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#### ABSTRACT

Background: A growing literature has revealed the effects of compassion training on a variety of important psychological qualities in adults. What is not yet well understood, however, is how to cultivate compassion in school and what impact compassion training has on the affective development of gifted adolescence.
Objective: The purpose of this study is to make the case for cultivating the compassion of gifted students in junior high school. This non-randomized controlled trial examined the effectiveness of SBCMC on the extent of compassion, emotional styles, and attachment styles in gifted adolescents.

Method: The participants in the experimental group were 27 adolescents (ages 12-13) under a secondary school gifted education program. The participants in the control group were 30 adolescents (ages 13-14) under another school's gifted education programs. The experimental group carried out a two-semester SBCMC program. The main learning was about 12-16 hours, 1-2 hours each time, supplemented by daily practice, and the control group had no special intervention. The participants completed questionnaires measuring compassionate engagement and action, fears of compassion, emotional styles, and attachment styles before and after treatment. Paired samples and independent samples nonparametric statistics assessed the within-group and between-group differences via change scores. Results: A five-module SBCMC program was designed and implemented. The results showed that after the intervention, the experimental group made progress compared with the control group in several indicators. There were significant differences between the engagement and action of compassion, emotional styles, the decrease of fears of compassion, and the decrease of anxiety and dismissing attachment.

**Conclusions:** This study explored the possible benefits of the affective development program based on compassion for gifted students. The five-module SBCMC program can indeed enhance gifted adolescents' social and emotional ability. However, the continued effect of the program still needs to be study in the future.

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#### **KEYWORDS**

Gifted Students, Affective Development, Compassion, Program Design

## The Advance of Modern Intelligence Theory and the Trend in Gifted Education under the Framework of Talent Development

#### Pei-Yu Lan

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Corresponding author, e-mail: joyblue1242@gmail.com

#### ABSTRACT

Over the past few decades, with the emergence of global issues such as climate change, information security, and technology ethics, perspectives on intelligence and talent development have evolved toward more diverse concepts. In other words, intelligence theory has shifted from essentialism to developmentalism regarding talent identification and development as a complex dynamic system. The complex system model considers the influence of physiological, psychological, and environmental factors on individual development. Furthermore, it indicates that an individual's cognitive ability, or intelligence, is not a linear predictor of his academic and social achievement. While many educators embrace the concept of multiple intelligence or practical intelligence, standardized intelligence tests, the most commonly used assessment tool for identifying gifted students, have remained unchanged for decades. The widespread use of intelligence tests indicates that general intelligence is an indispensable factor affecting talent development, even though it only partially explains the functioning of human minds. Although there is no single theory that explains individual differences in intelligence and abilities, the more human understands intelligence, the more conducive to the identification and cultivation of talents, which at the same time will promote equity and diversity in gifted education. In particular, this paper first discusses the advance of intelligence research from the perspectives of psychometrics, physiology, and sociology. Psychometrics is the most applicable method, while bias against minority groups from different cultural and socioeconomic backgrounds. The physiological approaches such as neural and brain imaging have cross-cultural explanatory power, but the direction of causality is unclear. The social approaches offer a holistic view of intelligence, yet they lack evidence-based research due to considerable factors involved. To conclude, this paper addresses the change of viewpoints in intelligence under the framework of talent development and the implication in gifted education.

#### **KEYWORDS**

Intelligence Theory, Talent Development, Concept of Giftedness

# A Study on Learning Style and Learning Needs of Introverted Gifted Students

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<sup>1</sup>Taipei Min-Quan Junior High School
<sup>2</sup> Department of Special Education, National Taiwan Normal University

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## ABSTRACT

The purpose of this study is to examine the learning styles and learning needs of college students with different backgrounds, identities, groups, and sex. In this study, 841 university students were surveyed (411 gifted students), and "Personality Scale", "Adult Learning Style Scale", and "Learning Needs Scale" were used as research instruments. The results of the independent sample t-test are as follows:

I. Learning styles and learning needs of introverted gifted students

Introverted gifted students prefer teachers to provide clear guidance, structured curriculum, and procedural learning. They are also good at using their personal experiences to help them to learn. In terms of learning needs, they need a quiet and independent study space for deeper thinking. Gifted and non-gifted students have no significant differences in learning style.

II. Differences in learning styles among college students with different backgrounds Learning style of introverted students relies on organized and structured teaching and thinking styles. Compared to other background variables showed that male students have a significantly higher preference for the learning style 'planning and execution' than female students.

III. Differences in the learning needs of university students with different background variables

Introverted students are significantly more likely to have three types of learning needs (i.e. 'summarizing and expressing', 'associating and structuring' and 'independent learning') than non-introverted students. The needs of introverts are clear guidance from teachers, the linking to past experiences, and the independent learning space. Compared to other background variables, especially in 'Summary and Expression', there are significant differences between gifted and non-gifted students, and female

students and male students.

#### IV. Conclusion

Introverted students need structured learning and space for solitude so that they can feel comfortable. Teacher should focus on quiet students, in addition to responding to students who initiate conversations, teachers should also be aware of the learning performance and attributes of relatively quiet students in the group.

### **KEYWORDS**

Gifted Students, Introversion, Learning Style, Learning Needs, College Students







## Leland Lee

Leland Lee was recognized as a genius painter by the Los Angeles Conservatory of Fine Art when he was 7 years old. His works have been invited to art exhibitions in Venice Italy, France, and Russia. His solo exhibition "No Limitation" was held at the Museum of Contemporary Art, Taipei and "I Love You" at Rouen City Hall, France. Recognized for his outstanding performance in art, Leland was awarded the 51st Top Ten Outstanding Young Persons, Taiwan in 2013, and was received by the Vatican Pope in 2014.

His creations are not limited by time and space. He is very skilled at using lines to extend, divide, collage, and mix various memory fragments of reality and imagination. Then he uses bold mixed color blocks as the basic unit to build a fantastic world he envisages, guiding his audience to traverse reality with his unique perspective.

The colors in Lee's works are unfettered and rainbow-like; the unrestrained lines run freely with imagination on the canvas. Works like "LOVE" and "Anytime" and the symbol of hearts frequently appear in the paintings, which not only become his unique signature but also reflect the abundant love in his heart.



## **Chi-Sheng Lin**

## **Chi-Sheng Lin**

Art creator in HSIAO-SHENG's Personal Studio

## EDUCATION

Hsuan Chuang University Department of Art & Creative Design Taipei Senior High School Department of Arts and Crafts

Chi-Sheng Lin is good at sketching and illustration, especially having a soft spot for antique buildings, humanities and cultures in Taiwan. He continues traveling, painting, photographing, hand-making to record and present. He hopes that the ancient buildings, theaters, railway stations, old streets and other Japanese buildings and rich cultural scenes in various parts of Taiwan will be recorded and preserved one by one.

## AWARDS

Honorable Mention, Painting Competition of sketching Japanese Zhongli
 Police dormitory, 2020

□ Judges' Award, Painting Competition of New Taipei City cultural heritage site, "black to 1919", Lealea Group, 2020

Honorable Mention and Group Exhibition, Painting Competition of Gen.
 SUN Li-Jen Residence, "black to 1919", Lealea Group, 2019

Judges' Award, Picture Book"The corner of happiness", 32th Hsinyi
 Children Literature Award, 2020

Two Excellence Award and one High Distinction Award, "The friendship on the sea", "Grandpa's wooden box" and "Fifth floor kids", National Students' Picture Book Creation Award, 2015-2017 □ The High Distinction Award, National Student Art Competition in ink paintings, 2013

## **EXHIBITION**

Group Exhibition, "顧兆仁師生城市聯展", National Taiwan Library, 22th
 June to 3rd July, 2022

□ Special Exhibition, 111 Anniversary of Beitou waterway (key vision manuscript displayed), 1st April, 2022 to March, 2023

Solo Exhibition, "Tails of the gutter story" at Hualien ARSMA Hotel, 1st
 October 2021 to 10th April 2022

Solo Exhibition, Picture Book "The corner of happiness" at Hua Shan Din
 Cosmos Creation, 26th February to 25th April, 2021

Attendance of Xindian Guangming Market Sketching Exhibition, 2020

 Attendance of Xindian "Always be in good health" Sketching Exhibition by Twilight Box, 2020

Group Exhibition, Taipei Train Station "The perfect dream train" Exhibition by National Taiwan Arts Education Center, 2018

## INTERVIEW

 Interview of Sketching at Hualien Jiang Jun Fu on TV Program "Our Island" of Chinese Public Television, 25th July, 2020

## PORTFOLIO

https://www.facebook.com/小勝の天空-1525289077713570/



## Hua-Hsuan Chung

## Hua-Hsuan CHUNG

CookBaron

#### **EDUCATION**

Huafan University Department of Fine Arts & Culture Creative Design

Hua-Hsuan Chung is an enthusiastic artist. She has chosen to pursue her dreams based on creativity and an attitude of peace of mind.

"Draw my thoughts and paint my love." She is very serious about doing right things that might be difficult for her. She uses her paintings to show the story of her state of mind, so that more people can see and recognize her efforts.

## AWARDS

2017 The second place of the Taipei Fubon Bank Artistic Achievement Awards for the Disabled

Winner of Ten Outstanding Young Persons in the  $\ensuremath{\mathsf{Art}}$  and  $\ensuremath{\mathsf{Culture}}$  category

2011 The second place of the Taipei Fubon Bank Artistic Achievement Awards for the Disabled

#### EXPERIENCE

2022 Attendance of 5th International Artist Day

2021 Art tutor in Yin-Guang Ice Desserts, Jingxing Long-Term Care

Attendance of The Collector's Award

Two pieces of paintings have been made for creative industries of Social

and Family Affairs Administration, MOHW

Attendance of World Autism Awareness Day

Art tutor in Daily institution at local community for People with disabilities Group Exhibition " The bridge of the world 2021", Children's Museum of Arts

#### 2020 Art Exposition, ONE ART Taipei

Solo Exhibition, Taipei

Group Exhibition, Found impossible-2020 Fubon Talented Disability

Award, Taipei

Art Festival "Ocean Moonlight", Tea Perfect Oolong Hsing-Tian Temple. Headquarter

Art Festival "Ocean Moonlight", Futatsu Fusi Gallery

Group Exhibition, BOPILIAO Historic Block, Autism Society of Taiwan

2019 Participated in Philanthropic activity, "Clear Star, Good Mood ", Autism Society of Taiwan

Participated in the Biennial Conference of the International Research Association for Talent Development and Excellence, IRATDE Group Exhibition, "HOSS Cultural, love the island", Taipei Attendance of Autism and Intellectual disabilities Open Audition of Paintings Exhibition Group Exhibition, "Heart of Color Painting", Hangzhou 2018 Attained in Amway Hope Maker Awards Ceremony Group Exhibition, "That year, blooming flowers", Taipei Group Exhibition, "The mountain id not high", Huafan university Solo Exhibition, "Little jellyfish", SkyJoys Creative Group Exhibition, "Extraordinary Art Power", New Taipei News reported, Taipei 2017 Participated in Charity Sales of Foundation for Autistic Children and adults in Taiwan (FACT) Attendance of Project of ENKABUNKO and Arts-in-Residence Co-working Taipei Solo Exhibition, "Spectrum", Taipei Group Exhibition, "Full start and satisfaction", Foundation for Autistic Children and adults in Taiwan(FACT)

Attained the "Hubei, Wuhan Taiwan Week", First Straits Forum in disabilities-related issues Solo Exhibition, "Want to fly", Huafan University Participated in Charity Sales of Foundation for Autistic Children and adults in Taiwan(FACT) Group Exhibition in Taipei Medical University Hospital 2016 Book reported by "Extraordinary Art" Group Exhibition, "Depression-Recovery", Nanhai Gallery, Taipei, Taiwan 2015 Attendance in 21th World Council for Gifted and Talented Children (WCGTC), Denmark Participated in Phoenix Sister Cities International Competition for Artists with Disabilities, Competition of English Poetry, USA Participated in Phoenix Sister Cities International Competition for Artists with Disabilities, Competition of Art, USA Book reported by "Soaring across borders", Youth Development Administration, Ministry of Education Attendance in New Aspect Spring Auction

2014 Art and Paint Exhibition of Autism of the cross-strait, "Hi Angel", China Solo Exhibition, Hongmei Road, Shanghai Art pieces including 42 pieces of paintings collected by Suzhou Art Museum, Suzhou, China 2013 Book "我是誰?他是誰?"co-published by Taipei Skywalker Holistic Care Association Attendance in 20th World Council for Gifted and Talented Children

(WCGTC), USA

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			-		
Identity	Title	Last Name	First Name	Chinese Name	Affiliation
Conference Chair	Dr.	Tsai	Ching-Hua	蔡清華政務次長	Political Deputy Minister, Ministry of Education, Republic of China (Taiwan)
	Prof.	Wu	Cheng-Chih	吳正己校長	President, National Taiwan Normal University
	Dr.	Peng	Fu-Yuan	彭富源署長	Director-General, K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)
Organizing Chair	Ms.	Hsu	Li-Chuan	許麗娟副署長	Deputy Director-General, K-12 Education Administration, Ministry of Education, Republic of China (Taiwan)
	Prof.	Kuo	Ching-Chih	郭靜姿教授	Professor, National Taiwan Normal University
			Keynote	Speaker	
Keynote Speech 1	Prof.	Siegle	Del		Neag School of Education, University of Connecticut, USA
Keynote Speech 2	Dr.	Sigafoos	Lisa		University of Texas at Austin, USA
Keynote Speech 3	Prof.	Sternberg	Robert		Cornell University, USA
Keynote Speech 4	Prof.	Plucker	Jonathan		John Hopkins University, USA

## **Participants List**

Identity	Title	Last Name	First Name	Chinese Name	Affiliation
Keynote Speech 5	Asst. Prof.	Pholprasert	Apichart		Chulalongkorn University, Thailand
Keynote Speech 6	Prof.	Sutherland	Margaret		University of Glasgow, UK
Keynote Speech 7	Prof.	Renzulli	Joseph		University of Connecticut, USA
Keynote Speech 8	Prof.	Sak	Uğur		Anadolu University, Turkey
Keynote Speech 9	Prof.	Ziegler	Albert		University of Erlangen-Nuremberg, Germany
Keynote Speech 10	Prof.	Hong	Dennis		University of California, Los Angeles, USA
Keynote Speech 11	Prof.	lp	Wing-Huen		Academia Sinica, Taiwan
			Invited	Speaker	
Symposium 1	Dr.	Anuruthwong	Usanee		Association for Developing Human Potentials and Giftedness, Thailand
	Prof.	Park	Kyungbin		Gachon University, ROK
	Prof.	Burns	Jan		Canterbury Christ Church University, UK

Identity	Title	Last Name	First Name	Chinese Name	Affiliation
Symposium 2	Prof.	Kuo	Ching- Chih	郭靜姿教授	National Taiwan Normal University, Taiwan
	Prof.	Sak	Uğur		Anadolu University, Turkey
	Dr.	Lin	Pei-Ying	林沛穎副教授	University of Saskatchewan, Canada
Symposium 3	Dr.	Yuen	Mantak		The University of Hong Kong, Hong Kong, China
	Dr.	Jung	Jae Yup Jared		The University of New South Wales, Australia
	Dr.	Chan	Serene		The University of Hong Kong, Hong Kong, China
Workshop	Dr.	Schüttler	Tobias		German Aerospace Center, DLR, Germany
			Chairp	erson	
Keynote Speech 1	Dr.	Roberts	Julia		Western Kentucky University, USA
Keynote Speech 2	Prof.	Wu	Ting-Fang	吳亭芳教授	National Taiwan Normal University, Taiwan
Keynote Speech 3	Prof.	Kuo	Ching-Chih	郭靜姿教授	National Taiwan Normal University, Taiwan

Identity	Title	Last Name	First Name	Chinese Name	Affiliation
Keynote Speech 4	Prof.	Tsai	Den-Mo	蔡典謨教授	National Kaohsiung Normal University, Taiwan
Keynote Speech 5	Dr.	Anuruthwong	Usanee		Association for Developing Human Potentials and Giftedness, Thailand
Keynote Speech 6	Prof.	Sumida	Manabu		Ehime University, Japan
Keynote Speech 7	Prof.	Chen	Hsueh-Chih	陳學志院長	National Taiwan Normal University, Taiwan
Keynote Speech 8	Dr.	Quek	Chwee Geok		Gifted Education Branch, Ministry of Education, Singapore
Keynote Speech 9	Prof.	Yu	Hsiao-Ping	于曉平理事長	Chinese Association of Gifted Education, National Taiwan Normal University, Taiwan
Keynote Speech 10	Prof.	Park	Kyungbin		Gachon University, ROK
Keynote Speech 11	Prof.	Sung	Yao-Ting	宋曜廷副校長	National Taiwan Normal University, Taiwan
Symposium 1	Prof.	Chiang	I-Tsun	姜義村主任	National Taiwan Normal University, Taiwan
Symposium 2	Prof.	Kuo	Ching-Chih	郭靜姿教授	National Taiwan Normal University, Taiwan
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徐瑄廷	縣立中正國民小學	特教組長
徐詩綺	國立台南大學特殊教育學系研究所	
涂家齊	國立彰化師範大學資優教育研究所	
翁呈晞	市立黎明國民中學	臨顧助理員

姓名	服務單位	職稱
翁偉珉	國立彰化師範大學	
袁明乾	市立成功國民小學	普通班教師
高綺憶	市立慈文國民中學	專(科)任教師
高儷云	國立高雄科技大學	大專資源教室輔導人員
張乙熙	縣立枋寮高級中學	班級導師
張正勤	市立成功國民中學	其他組長
張伊岑	臺北城市科技大學	大專資源教室輔導人員
張吉逸	市立建國國民中學	專(科)任教師
張哲智	市立東門國民小學	班級導師
張曼玲	市立幸福國民中學	專(科)任教師
張淑芬	市立臺中國民小學	特教組長
張麥	市立重慶國民小學	臨顧助理員
張惠涵	國立科學工業園區實驗高級中學	專(科)任教師
張詠琦	國立彰化師範大學特殊教育學系	
張雅惠	市立坪林國民小學	組長兼特教教師
張靖卿	國立彰化師範大學	專(科)任教師
張維真	市立龍岡國民中學	主任兼特教教師
張翠玉	國民小學	
張慧如	市立西苑高級中學	特教組長
張簡雲翊	國立臺灣師範大學	
張寶云	市立瑞芳國民小學	特教組長
張馨文	市立民生國民小學	專(科)任教師
曹素珍	市立大成國民小學	班級導師
梁凱璇	台北市立永安國民小學	其他

姓名	服務單位	職稱
莊立群	臺北市懷中非營利幼兒園(委託財團法人海	教保員
	棠文教基金會辦理)	7X IN R
莊惠琦	淡江大學	大專資源教室輔導人員
莊雅文	市立大社區大社國民小學	班級導師
莊馥毓	市立桃園國民中學	專(科)任教師
許加豐	國立臺北教育大學	班級導師
許秀玲	國立彰化師範大學	
許芮瑄	國立彰化師範大學	
許昭真	市立新湖國民小學	其他
許珈瑋	國立台北教育大學	
許健基		其他
許淑子	臺北市中山區吉林國民小學附設幼兒園	班級導師
許莉莉	財團法人瑪利亞社會福利基金會	職能治療師
許凱婷	市立桃園國民中學	專(科)任教師
許菀恬	私立立人國民中學(小)	班級導師
許雅喻	國立科學工業園區實驗高級中學	專(科)任教師
許雅筑	市立觀音國民中學	班級導師
許瓊云	國立臺南大學	其他
郭李義	縣立東興國民中學	特教組長
郭明偉	市立龜山國民中學	班級導師
郭柏宇	市立永平高級中學	專(科)任教師
郭美萍	縣立潮州國民中學	班級導師
郭讚美	市立慈文國民中學	專(科)任教師
陳子衡	台北教育大學 特殊教育研究所碩士班	

姓名	服務單位	職稱
陳巧旻	彰化縣盲人福利協進會	定向行動專業人員
陳巧芸	國立臺南大學特殊教育學系	碩士生
陳巧萱	明道大學	大專資源教室輔導人員
陳如湲	國立彰化師範大學特殊教育學系研究所	
陳汝綺	市立海山國民小學	其他
陳芃蓁	國立臺北教育大學特殊教育研究所	研究生
陳怡安	市立前峰國民中學	班級導師
陳明君	中華民國學習障礙協會	其他
陳泓儒	市立會稽國民中學	專(科)任教師
陳玟瑾	國立政治大學附屬高級中學	專(科)任教師
陳玟璇	國立羅東高級中學	專(科)任教師
陳芝	國立臺北教育大學特殊教育碩士班	
陳俐汝	市立中壢國民中學	專(科)任教師
陳姿佑	市立中正國民小學	巡迴輔導教師
陳宥妤	縣立南郭國民小學	專(科)任教師
陳建安	國立臺南大學特殊教育學系(暨研究所)	
陳建州	東海大學	大專資源教室輔導人員
陳昱霖	臺北市立大學特殊教育學系	
陳郁婷	高雄師範大學特殊教育系研究所	
陳郁雯	市立永順國民小學	巡迴輔導教師
陳夏津	家管	
陳家榆	郭明陽骨外科	物理治療師
陳家聲	市立麗湖國民小學	班級導師
陳素珠	市立四維國民小學	臨顧助理員

姓名	服務單位	職稱
陳素霞	市立獅甲國民中學	臨顧助理員
陳敏華	市立永和國民中學	專(科)任教師
陳淑萍	縣立新港國民中學	專(科)任教師
陳逸群	市立經國國民中學	專(科)任教師
陳雅芳	市立武崙國民中學	班級導師
陳寗	市立和平實驗國民小學	特教組長
陳新慧	臺北市私立國泰幼兒園	班級導師
陳筱婷	臺北市立啟明學校	
陳瑩倫	縣立潮州國民中學	專(科)任教師
陳曉屏	高雄市立翠屏國民中小學	班級導師
陳諭賢	國立高雄師範大學	
陳嬿如	市立忠明高級中學	主任兼特教教師
陳韻宇	市立慈文國民中學	班級導師
陸世嘉	市立鷺江國民中學	特教組長
彭彦翎	台南大學	
彭淑珍	市立安樂高級中學	特教組長
彭驛捷	私立光仁高級中學	其他組長
曾子庭	國立臺北教育大學特殊教育碩士班	
曾珮容	彰化師範大學特殊教育學系	
曾鈐威	市立平鎮國民中學	班級導師
曾嫆華	高雄市岡山區兆湘國民小學附設幼兒園	班級導師
曾麗卿	市立潭子區新興國民小學	巡迴輔導教師
游一庭	國立臺東大學 特殊教育學系	
游佳玲	國立彰化師範大學特殊教育研究所	

姓名	服務單位	職稱
游佳蓁	國立清華大學	大專資源教室輔導人員
游彦辰	國立武陵高級中學	班級導師
游智鈞	臺中教育大學	
賀超穎	國立彰化師範大學特殊教育學系	
黄千容	市立興雅國民小學	班級導師
黄文玲	市立三多國民中學	組長兼特教教師
黄正君	市立東峰國民中學	專(科)任教師
黃仲豪	市立建國國民中學	專(科)任教師
黄汝鈴	市立臺中國民小學	專(科)任教師
黄自強	國立臺北教育大學早療所	
黄宜貞	市立明志國民中學	主任
黄明真	私立海星高級中學	班級導師
黄俐瑋	市立文德國民小學	班級導師
黄俞禎	市立前金國民中學	專(科)任教師
黄建勳	市立永康區勝利國民小學	班級導師
黄盈翠	市立萬華國民中學	專(科)任教師
黄美瑜	市立育賢國民中學	班級導師
黄家杰	市立明華國民中學	專長借調
黄國智	市立永和國民中學	專(科)任教師
黄勝吉	國立高雄師範大學 科學教育暨環境教育研	
史 / 分 日	究所	
黄琪雯	國立彰化師範大學特教所夜碩	
黄舜煒	市立秀山國民小學	巡迴輔導教師
黄瑞萍	國立臺北教育大學	

姓名	服務單位	職稱
黃筱婷	市立頭家國民小學	職能治療師
黄靖純	國立東華大學	大專資源教室輔導人員
黄頌慈	關埔國民小學	特教業務承辦人
黄銘義	市立龍潭國民中學	專(科)任教師
黄顯棻	國立高雄科技大學	大專資源教室輔導人員
楊玉鈴	市立清水高級中學	專長借調
楊政儒	市立日新國民小學	班級導師
楊家慎	國立臺灣師範大學	
楊珩	國立東華大學	大專資源教室輔導人員
楊惠宇	台東大學特教系	學生
楊愉婷	樹人醫護管理專科學校	
楊雅婷	高雄市立翠屏國民中小學	專(科)任教師
楊雅嵐	臺中市大里區草湖國民小學附設幼兒園	臨顧助理員
溫進明	臺北市立建國高級中學	專(科)任教師
葉千祺	市立會稽國民小學	班級導師
葉月雲	市立漳和國民中學	專(科)任教師
葉雅鳳	市立延平國民中學	特教組長
董宜樺	國立東華大學	大專資源教室輔導人員
解宗翰	市立安溪國民中學	專(科)任教師
詹秀美	國立臺中教育大學	專(科)任教師
詹坤寧	臺北市中正區忠義國民小學附設幼兒園	班級導師
鄔佳真	國立彰化師範大學特殊教育研究所	
鄔經英	國立彰化師範大學特教所在職碩士班	
廖子嫺	國立高雄師範大學	

姓名	服務單位	職稱
廖若彤	嘉義大學	學生
廖智偉	市立仁愛國民中學	專(科)任教師
熊世欽	市立石牌國民中學	專(科)任教師
趙淑美	慈濟科技大學	班級導師
趙淑媚	國立臺灣師範大學	
趙烱棣	國立高雄師範大學	
趙維菡	臺灣公益社會實踐協會	
齊佑廷	嘉義大學特殊教育學系	
劉立晴	縣立竹東國民小學	班級導師
劉玟毅	縣立竹林國民小學	專(科)任教師
劉虹合	新北市私立劍聲幼兒園	班級導師
劉婉玉	市立新市國民小學	特教組長
劉嘉惠	縣立寶桑國民小學	巡迴輔導教師
劉瑩貞	縣立新圍國民小學	專(科)任教師
劉寶如	臺中市中區光復國民小學附設幼兒園	臨顧助理員
潘明珠	縣立忠孝國民小學	專(科)任教師
潘宣伊	國立佳冬高級農業職業學校	其他
蔡伊宣	國立彰化師範大學特殊教育系資賦優異教	
茶厅旦	育碩士班	
蔡汝渝	市立龍岡國民中學	班級導師
蔡志宏	縣立田中高級中學	專(科)任教師
蔡佩宜	市立大有國民中學	特教組長
蔡佩珊	市立暖暖高級中學	巡迴輔導教師
蔡佳妤	朝陽科技大學幼兒保育系	學生

姓名	服務單位	職稱
蔡典謨	國立高雄師範大學	其他
蔡孟霖	市立鷺江國民中學	專(科)任教師
蔡明原	國立科學工業園區實驗高級中學	主任
蔡雨潔	國立臺東大學	大專資源教室輔導人員
蔡姝妍	明道大學	大專資源教室輔導人員
蔡惠如	市立建國國民中學	專(科)任教師
蔡晴卉	國立南科國際實驗高級中學	專(科)任教師
蔡逸勝	市立武崙國民中學	班級導師
鄧仔珊	縣立陽明國民中學	專(科)任教師
鄭又嘉	臺灣師範大學特殊教育研究所	
鄭文蓉	國立臺灣師範大學	
鄭世昌	市立安和國民中學	班級導師
鄭巧函	臺中市私立東勢芝蘇街幼兒園	教保員
鄭伊均	臺南大學特殊教育學系碩士班	
鄭羽	國立台東大學	
鄭孝忠	(法務部)財團法人被害人保護協會	其他
鄭媄瑧	國立彰化師範大學	
鄭景元	國立台北教育大學	
鄭裕峰	市立蓬萊國民小學	班級導師
蕭蜀珍	國立臺北教育大學特殊教育學系碩士班	其他
蕭鈺蓁	中州科技大學	大專資源教室輔導人員
賴彥志	國立彰化師範大學	
賴昱龍	市立慈文國民中學	普通班教師
賴家溵	瑞復益智中心	其他

姓名	服務單位	職稱
賴惠如	市立臺中工業高級中等學校	其他
賴新燕	國立彰化師範大學	
賴韻婷	臺北市立第一女子高級中學	專(科)任教師
戴玉舟	市立西松國民小學	班級導師
戴淑貞	國立臺北教育大學	
出 후 기	臺北市懷中非營利幼兒園(委託財團法人海	-1-1 /2 - 1首 4-1
戴嘉欣	棠文教基金會辦理)	班級導師
薛淑如	臺北市立士林高級商業職業學校	專(科)任教師
謝汶珀	彰化縣盲人福利協進會	定向行動專業人員
謝依雯	國立臺南大學	其他
謝宜芳	縣立萬丹國民小學	組長兼特教教師
謝秉桓	市立光明國民中學	專(科)任教師
謝靜怡	縣立東石國民中學	專(科)任教師
謝麗燕	市立安溪國民中學	專(科)任教師
鍾文琳	國立清華大學	大專資源教室輔導人員
鍾伊婷	市立大直高級中學	專(科)任教師
鍾佩妤	國立臺灣師範大學	
鍾岳彤	市立大崗國民小學	臨顧助理員
鍾琁郁	市立實踐國民中學	特教組長
鍾雅琳	國立東華大學	大專資源教室輔導人員
鍾德翰	國立彰化師範大學	
鞠澔璇	縣立中正國民小學	專(科)任教師
韓岳樺	國立羅東高級中學	特教組長
簡士峻	縣立彰興國民中學	班級導師

姓名	服務單位	職稱
簡形紋	市立昌平國民小學	普通班教師
簡志樺	市立中興國民中學	特教組長
簡浩倫	國立臺灣師範大學特術教育研究所	
簡翊芸	國立臺中教育大學	
簡蔓婷	國立羅東高級中學	班級導師
顏詩嘉	縣立南郭國民小學	專(科)任教師
魏杏真	國立臺灣科技大學	大專資源教室輔導人員
龎詩倩	市立大直高級中學	班級導師
譚紓珮	國立臺北教育大學特殊教育學系研究生	
蘇玟嫣	臺南大學特殊教育學系	其他
蘇筱晴	市立龍華國民小學	臨顧助理員
蘇燕華	市立萬福國民小學	特教組長
Jean Lee	臺北市私立奎山實驗高級中學	其他
于宗荃	市立民權國民小學	專(科)任教師
尤淑萍	東海大學	大專資源教室輔導人員
日茉樂蔓	影士中工国日中国	<b>声(刮) 仁 払</b> 丘
巴各它外	縣立中正國民中學	專(科)任教師
毛文君	高雄市特教資源中心	社會工作師
王妤慧	國立高雄師範大學特殊教育學系	
王俊凱	市立光武國民中學	班級導師
王昱婷	縣立鹿東國民小學	巡迴輔導教師
王昱婷	國立台中教育大學	
王郁翔	國立彰化師範大學資賦優異研究所	

姓名	服務單位	職稱
王郁鈞	市立平南國民中學	班級導師
王偉文	文化大學	
王祥瑋	國立東華大學	大專資源教室輔導人員
王舒儀	市立民生國民小學	班級導師
王靖雯	市立中山高級中學	組長兼特教教師
王緣圓	市立思賢國民小學	巡迴輔導教師
王靜新	市立福豐國民中學	班級導師
王櫻燕	市立林園國民小學	普通班教師
王懿貞	新北市私立凱撒琳幼兒園	
白岳臻	國立臺北教育大學特殊教育學系碩士班	
任晏儀	市立東光國民小學	專(科)任教師
向麗珍	市立文昌國民中學	專(科)任教師
江佩茹	財團法人華盛頓文教基金會附設臺中市私	教保員
	立市政幼兒園	
江怡蓁	華興弦樂團	
江昕潔	國立臺灣師範大學	
江科鋒	市立建國國民小學	班級導師
池雅珺	寶珠職能治療所	職能治療師
何佳靜	市立建國國民中學	班級導師
何孟娣	高雄市旗山區溪洲國民小學附設幼兒園	班級導師
何信儀	縣立南安國民中學	專(科)任教師
何淑賢	臺北市立聯合醫院	
余承育	市立東門國民小學	班級導師
吳心怡	德明財經科技大學	大專資源教室輔導人員

姓名	服務單位	職稱
吳玉玲	其他	其他
吳佐晟	南華大學	
吳君瑋	臺北市立木柵高級工業職業學校	專(科)任教師
吳希茹	國立台北教育大學特殊教育研究所	
吳秀卿	市立漳和國民中學	專(科)任教師
吳佳芳	市立永和國民小學	班級導師
吳宗修	縣立東興國民中學	班級導師
吴岱芸	國立臺灣師範大學特殊教育學系在職專班	
吳忞蓉	市立安溪國民中學	專(科)任教師
吳忠憲	明道大學	大專資源教室輔導人員
吳怡靜	市立忠福國民小學	巡迴輔導教師
吴昀霖	國立彰化師範大學 特殊教育研究所	
吴明珍	市立育林國民中學	專(科)任教師
吳青陵	縣立光華國民小學	班級導師
吳彥宗	市立白雲國民小學	其他
吴柏均	國立彰化師範大學	
吳珍玲	國立臺北教育大學特殊教育研究所	
吳家宏	國立彰化師範大學特殊教育研究所	
吳時華	市立中西區成功國民小學	專(科)任教師
吳惠慈	東海大學	大專資源教室輔導人員
吳琬儀	關埔國民小學	巡迴輔導教師
吳嘉明	縣立南郭國民小學	專(科)任教師
吳誼箴	國立高雄師範大學	
呂亦鎔	縣立玉里國民中學	專(科)任教師

姓名	服務單位	職稱
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呂佳儒	市立文昌國民中學	專(科)任教師
呂嘉瑋	市立文昌國民中學	專(科)任教師
宋玉文	市立德南國民小學	班級導師
宋宜蓁	桃園市楊梅區富岡國民小學附設幼兒園	班級導師
宋怡潔	其他	其他
巫雪莉	市立興雅國民小學	班級導師

## 感謝全體工作人員

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劉宛瑄助理	國立臺灣師範大學特殊教育學系
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姓名	服務單位
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李美惠主任	臺北市仁愛國民中學
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藍珮瑜助理	國立臺灣師範大學特殊教育學系
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