



Newsletter September 2019

**Kingston
University**
London

Foreword

Welcome to the second newsletter of the Developing Minds Lab. We have had a busy summer which has included presenting our research at national and international conferences, publishing our research findings in world leading Developmental Psychology journals, and obtaining research funding for future studies.

We enjoyed hosting Young Scientist Days and meeting over 90 children and adolescents across the two days in May. We hope your children enjoyed it as much as we did. The outcomes of the research can be found in this newsletter.

Our feature article is about children's creativity and how this can be enhanced in the classroom. We will also be hosting a workshop on developing mathematical abilities and creativity in November.

If you would like to follow our activities then please 'like' [our Facebook page](#) join our mailing list [here](#) so that we can send you information about our upcoming workshops and events.

We hope to see you at an event soon.

Kind regards,

Dr Elisa Back
Director of the Developing Minds Lab
e.back@kingston.ac.uk



**Kingston
University**
London

Young Scientist Days Outcomes



A big thank you to those who attended and volunteered for the Young Scientist Days (YSD) in May half-term. Children and adolescents took part in a number of games and research tasks that were part of staff, PhD, MSc and BSc Psychology students' research.

[Here](#) you can find a video of the Young Scientist Days!!

Since May we have been able to analyse the data for some of the studies and we are going to provide an overview in this new section of our Newsletter. In this issue we will present the studies run by **Hayley Hunt** and **Ifigeneia Manitsa**.

Hayley Hunt is a PhD student (supervised by Dr Elisa Back) Her research focuses on how children and adolescents with ASD process faces and understand information from social scenes. During the YSD she ran two studies designed for exploring and understanding Autism. If you have any questions you can contact her at Hayley.Hunt@kingston.ac.uk



Study 1 – Understanding thinking and feeling using eye-tracking technology

In this study Hayley investigated people's looking behaviours when watching small extracts from the 2011 silent movie *The Artist*. She was mainly interested in where a person looks and whether they talk about the feelings of the actors in the scene. This helps her to understand whether someone with ASD is as able to look at the actors in the video clips and understand their feelings in a similar way to their typically developing peers.

Preliminary Outcomes

Early observation of the data for how children with ASD look at socially important parts of the face, usually the eyes and to some extent the mouth, shows that participants with ASD align with their neurotypical peers and use the eyes when interpreting the way someone is thinking and feeling. There are some differences in the how long and how frequently our participants with ASD looked at the eyes and further exploration of the data should reveal a closer understanding of these small differences that may have a bigger impact on social communication skills for people with ASD. Early indications include that there are some differences in the ability to accurately label complex mental states for children and adolescents with ASD and further explorations hope to reveal what may contribute to this.



Ifigeneia Manitsa is a PhD student (supervised by Dr Fiona Barlow-Brown). Her research focuses on the impact of social inclusion on the self-concept of adolescents with visual impairment and the way this differs from their typical sighted peers. At the YSD she ran a study with adolescents that looked into social relationships that adolescents develop in their school environment.

If you have any questions you can contact her at k1738620@kingston.ac.uk

Study 2 - Social relationships in adolescence

Adolescence is a very sensitive period for children because body changes dominate and they might provoke feelings of frustration and anxiety. Additionally, adolescents usually prefer to spend most of their time with their peers rather than with their family members. However, if the relationships with their friends are not stable, adolescents may feel isolated. Many studies have indicated that the development of healthy social relationships during adolescence may be a precursor of success in future career development and romantic relationships in adulthood. In this study Ifigeneia asked adolescents to complete a questionnaire to investigate the social relationships that they develop with their teachers and peers at school. The findings of this study may help future researchers to create innovative educational approaches which will promote the well-being of adolescents who feel more vulnerable. They may also help people who interact with adolescents, such as parents, headteachers, teachers and special educators, identify the students who need more help and provide them with the appropriate support.

Preliminary Outcomes

- Most of the adolescents who took part in the study reported high scores of social inclusion.
- Generally, the social relationships with their teachers were found to be a protective factor against the adverse experiences of peer rejection.



We need your help!

We are always grateful for any help in recruiting participants for our studies which aim to understand how minds develop.

Emotion
Understanding
in
children with
Autism (ASD)

Why is this important? Previous studies have shown that some children with ASD are able to infer mental states and emotions of other people. However, further research is required into whether they understand the reasons behind how other people feel in more real-life social situations.

Who can take part? Typically developing children and children diagnosed with ASD between the ages of 6 and 11 years old.

What does taking part entail? Participants will view videos that represent everyday life situations and will be asked comprehension questions related to the videos. Also, children will take part in verbal and non-verbal IQ tests.

Who to contact? Dr Elisa Back: E.Back@kingston.ac.uk

Maths
abilities in
children and
adolescents
with Autism
(ASD)

Why is this important? Are children with ASD gifted when it comes to maths? Or do they struggle? What prevents them from learning maths? Findings from previous studies are inconsistent and further research is required to allow the development of more efficient educational programmes.

Who can take part? Children and adolescents diagnosed with ASD aged between 10 and 18 years old.

What does taking part entail? Each participant will take part in some mathematical tasks both on computer and on paper. The whole session will take no longer than 30 minutes and breaks will be taken when needed.

Who to contact? Erica Ranzato: e.ranzato@kingston.ac.uk



Cultivating Creativity in the Classroom

Wendy Ross

In 2021, the PISA test (which ranks countries according to their educational performance) will be assessing students' creativity for the first time. This reflects a growing focus across national curricula on creativity in education. Creativity is being marketed as an **essential skill for the 21st Century**, but beyond subjects explicitly considered creative, students and teachers don't always have the time or even the skills to develop it. There is a tension between the curriculum calls for creativity and teachers' perceptions of what constitutes creativity along with the very real demands of the modern classroom and its standardised testing regimes. Here at *Developing Minds* we are interested in how we measure creativity and how we can enhance it in children and adults.

What is creativity?

Surveys of teachers' attitudes (see Bereczki & Kárpáti, 2018 for a systematic overview of research in this area) suggest that teachers believe that creativity is an innate skill, is related to artistic domains and requires a product.



Although the standard definition of creativity has been in use for over 50 years, it is not so well known to those in education. In all its forms it consists of two necessary aspects: **originality** and **appropriateness**. Teachers and parents tend to focus on the **originality** aspect of the definition which is related to divergent thinking rather than the **appropriateness** aspect which requires more convergent thinking. These misplaced beliefs may be hampering creativity in the classroom.

There is also confusion about creativity as a topic reflecting practice considered **artistically creative**, a skill and a way of teaching. For example, all three of these aspects are part of the definition used in the 2017 report on Creativity in the Curriculum commission by NASUWT. However, a focus on artistic creativity and creativity as a final product means that creativity may be neglected in other parts of the curriculum which focus less on artistic creativity. Rather, creativity should be considered as the generation of new ideas across domains rather than concentrated in traditional creative subjects.

The 4C model

The 4C model by **James Kaufman** and **Ron Beghetto** builds on previous research that recognised two main dimensions of creativity.

Big C creativity, as it is known, is what we most commonly think of when we think about creativity, that is that the eminent creatives from Shakespeare to Picasso.



Little c creativity describes the creative processes that happen in a mundane way such as when we create a new meal out of the left overs in the fridge which requires creativity but not on a more everyday level – so-called everyday innovation.

Kaufman and Beghetto added mini-c and Pro C to this model both of which are relevant to creativity in the classroom. This then created a developmental trajectory in which **creativity can be seen to be happening in different forms across different time scales**. It is also a leveller – creativity in this model is experienced by everyone and is therefore appropriate to a classroom full of individuals.

Mini c creativity is defined as ‘novel and personally meaningful interpretation of experiences, actions and events’ (Kaufman & Beghetto, 2009, p3) and the authors explicitly link it to high school students’ experience of learning and assimilating new facts. It also broadens creativity beyond the production of something new to encompass intrapersonal observations and new knowledge.

Pro c creativity is also an important aspect of creativity when it comes to explicit teaching and coaching of creativity. Pro c recognises that there is a level of creativity which extends beyond the everyday but also doesn't attain Big C creativity. It is this level of creativity which is trained in school.

Convergent Creativity

Creativity is often tested by asking people to come up with something new or assessed with a divergent thinking task which typically ask people how many different uses they can think of for an everyday item.

However, creativity is based on two criteria – something original and something appropriate. To fulfil the second criteria involves a lot of convergent thinking and the evaluation of the novel thought. This is an often-neglected aspect of creativity when it is taught in the classroom where the focus can be on the idea generation rather than what we can usefully do with those ideas. Both aspects are important.



How to enhance creativity in the classroom

Give choices – if children have choices then they are more likely to follow new paths. Don't be afraid to let them do so, part of learning how to successfully evaluate creative ideas which is essential for creativity is making mistakes and seeing what works.



Reverse narratives – Counterfactual, 'What if', thinking is essential for creativity. Engaging in other possible worlds not only sparks imagination but also allows children to explore the limits of the actual. Ask children what would happen if Cinderella didn't meet her prince or if rain didn't fall down or if the Treaty of Nations had been a success.

Engage children materially and socially – Creativity cannot happen in a vacuum, new thoughts can't arise in a closed system. Allowing children to engage with objects outside of their imagination may make them more creative. Big C creativity is also fostered by collaboration, and mini c is no different. Allowing children to spark ideas off things and other people will enhance their creativity.

Allow time for reflection – Incubation (that is putting an idea to one side) has been shown to increase the number of divergent thoughts in experiments. Don't push children to answer or create straight away but allow them time to reflect.



Further reading

Beghetto, R., Kaufman, J.C., & Bae, J. (2014) [Teaching for Creativity in the Common Core Classroom](#). Teacher's College Press: Columbia

Bereczki, E. O., & Kárpáti, A. (2018). [Teachers' beliefs about creativity and its nurture: A systematic review of the recent research literature](#). *Educational Research Review*, 23, 25–56.

Kaufman, J. C., & Beghetto, R. A. (2009). [Beyond big and little: The four C model of creativity](#). *Review of General Psychology*, 13, 1–12.

Meet the Researcher

Erica Ranzato



Founded in 2019, Developing Minds is a research group consisting of academics, PhD students and researchers with a broad range of interests and expertise in how children learn and develop.

We will use this space to know more about its members. The first interview is with Dr Elisa Back, Director of the Developing Minds Lab.



Dr **Elisa Back** joined the Department of Psychology at Kingston University in 2008. Her current research focuses on how individuals with autism perceive and interpret the world and the impact this has on their daily life.

How did you decide to get into psychological research?

I really enjoyed my undergraduate dissertation research project and so I decided to develop a research proposal and I was awarded with a funded scholarship to complete my PhD in Psychology at the University of Nottingham. After I obtained my PhD in 2006, my first post-doctoral research position was at the University of Birmingham carrying out Theory of Mind research.

You are interested in a specific area of psychology that investigates social-cognitive development. Can you tell us what it is and why you are interested in it?

Social-cognitive development focuses on the role that cognitive processes play in social interactions and how this might change over time. I am interested in this as it can explain how we interpret other people's thoughts and feelings and the impact this has on daily life.

Your research has included individuals with autism. Why did you choose to study this population?

There are a lot of theories about autism that are deficit accounts which focus on their impairments rather than strengths. In my experience, the abilities of individuals with autism have been underestimated even in areas such as social communication.

Can you explain what “theory of mind” is? Why is it important?

Theory of Mind is about understanding other people’s mental states and as people don’t always explicitly tell you their thoughts then we often have to make inferences based on limited verbal and non-verbal information.



Can you tell us about a recent development in your research area that you were impressed by/made you think?

Adolescents with autism spontaneously look at the eyes when inferring mental states (e.g., worried, relieved) from faces. Therefore, not all individuals with autism are impaired in this area.



What research project are you working on currently?

I’m working on several research projects but one is related to exploring different aspects of emotion understanding in children with autism (recognition, inferring causality, predicting appropriate responses, and empathy).

Can you tell us about one of your publications?

My recent publication in a world leading journal “Child Development” investigated **how** adolescents with autism infer mental states from faces using response time measures to explore speed of responding and eye-tracking to reveal any differences in face processing strategies. Findings suggested that adolescents with autism had similar accuracy, response times and eye fixations to typically developing adolescents. Therefore, it was concluded that *not all individuals with autism have difficulties inferring mental states from faces* and that they process faces in a similar way to typically developing adolescents.

Can you give us an example of the impact of your research?

Findings from my research has raised awareness about the abilities of individuals with autism and my research on face processing has been used by both educators and clinicians and other professionals who work with individuals with autism across the lifespan.



What is the best thing about being a researcher?

The independence to discover and contribute new knowledge and subsequently improve current practice.

What do you wish you knew as a student before you became an academic?

You need to be good at multi-tasking! Being a researcher, lecturer and the many other roles that go along with these.

Sharing our research

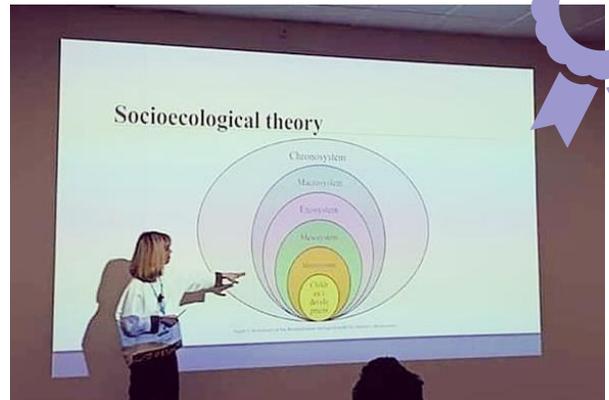


Dr Elisa Back and Erica Ranzato presented their research at the **Neurodevelopmental Disorders Annual Conference** at the University of Surrey on 20th June 2019.

Dr Elisa Back presented a talk on *Emotion understanding in children with ASD*.

Erica Ranzato presented her work on *Mathematical abilities in ASD*.

Congratulations to **Ifigeneia Manitsa** who presented her work and received the 1st prize at the **10th Annual Faculty of Business and Social Sciences Conference in Kingston University**



Rose Turner presented her paper at the **British Society of Literature and Science in Surrey** titled *Immersion in fictional stories and empathic accuracy: Methodological challenges and future research*.

She also gave an invited workshop about her paper titled *Fiction and empathy: a multidimensional approach* at **SOAS**, London.

Recent Publications

Back, E. (2019). [Inferring mental states from dynamic faces in adolescents with autism spectrum disorder: Insights from eye-tracking.](#) *Child Development*.

Livanou, M., Furtado, V., Winsper, C., Silvester, A., & Singh, S. P. (2019). [Prevalence of mental disorders and symptoms among incarcerated youth: a meta-analysis of 30 studies.](#) *International Journal of Forensic Mental Health*, 1-15.

Turner, R. & Felisberti, F. M. (2019). [Relationships between fiction media, genre, and empathic abilities.](#) *Scientific Study of Literature*, 8, 261-292.

Van Herwegen, J., **Ranzato, E.**, Karmiloff-Smith, A., and Simms, V. (2019). [Eye movement patterns and approximate number sense task performance in Williams syndrome and Down syndrome: a developmental perspective.](#) *Journal of Autism and Developmental Disorders*.

Funding and collaborations

We are excited to announce that **Rose Turner** successfully submitted a research project as part of the *European Federation of Psychology Students' Associations' Junior Researcher Programme*. This project examines the effects of digital and non-digital fiction-engagement on empathic abilities and it will be run across six different countries over the next year.

Congratulations to **Ifigeneia Manitsa** for winning a research grant funded by the *Sir Richard Stapley Educational Trust*.

Future Events

Developing mathematical abilities and creativity

This workshop will take place at Kingston University in **November 2019**.

More information will follow soon. Please register your interest [here](#) and we will keep you posted.



Group members

Academics

Dr Elisa Back

Dr Fiona Barlow-Brown

Dr Maria Livanou

Prof. Muthanna Samara

PhD Students

Hayley Hunt

Rashma Hirani

Wendy Ross

Ifigeneia Manitsa

Researchers

Erica Ranzato

Rose Turner



**Kingston
University
London**

Please let us know if you have any questions about our research. You can leave a comment on our [FB page](#) or send an email to KUDevelopingMindsLab@gmail.com

Did you read our previous newsletter? You can find it [here](#)

Stay tune: more updates and events will follow

Follow us on  