

**Exploring e-Learning and
Communication Tools for
Improving Children's Language
Usage in Social Interactions:
EChoeS**

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What Kind of project is EChoeS?

- Small (duration 6 months)
- Scoping
- Interdisciplinary
- Involving researchers, users, carers, practitioners, teachers and parents
- With aim to produce a large(r)-scale proposal

Overview of EChoeS

What is the impact on learning of children's language usage during collaborative tasks?

- What is the relationship between children's ability to recognise the intentions of others, their language skills and their cognitive development?
- What e-learning and multimodal tools are suitable/available for use by children of different cognitive abilities for collaborative tasks involving language (spoken and/or graphical)?

Tomasello *et al.* (in press)

Social and communication skills derive from three types of social engagement:

- (1) Dyadic engagement: the ability to share behaviour and emotions
- (2) Triadic engagement: the ability to share goals and perceptions and
- (3) Collaborative engagement: the ability to share intentions and attention with others in pursuit of common goals.

Enable participation in collaborative cultural practices

Essential to later cognitive development

What Kind of Children?

- Young school children 4-10 years old
- Children with Asperger syndrome

Typical vs. Atypical development

- Recognition of intentionality of others
- Ability to distinguish between desires (goals) and intentions (plans) of others
- Development of social engagement skills
- Development of language skills

Tools

- What e-learning environments are conducive to facilitating the development of socio-linguistic skills in children?
- What modalities are appropriate?
- What existing tools are available and how do they fair with two groups of children?

Objectives 1

1. Define research questions re improving social and communication skills of early school and ASD children - relationship between children's ability to recognise intentions of others and their communication skills.
2. Determine technology-enhanced environments conducive to facilitating development of relevant socio-linguistic skills in children.
e.g. embodied conversational agents?
In what ways are such attractive, engaging and educational? to all?

Objectives 2

3. Determine relevant communication modalities applicable to young children (ND and ASD)
e.g. same for all?
4. Identify existing tools to facilitate communicatively and socially rich child-computer interaction
5. Investigate appropriate evaluation methodologies
How can future tools be evaluated re research and educational value?
What measures of effectiveness can be used reliably?
Develop metrics to determine learning gains in terms of the cognitive, social, and linguistic skills

Organisation of work 1

Task 1. Extensive literature review on relationship between the ability of young children and children with ASD to recognise the intentions of others and their communication skills.

Task 2 Comprehensive review of multimodal communication tools available for enabling interaction between children and computers.

Task 3 Comprehensive review of multimodal communication tools available for enabling interaction between children with Asperger syndrome and computers.

Organisation of work 2

Task 4 Establishment of a web presence (a Wiki) for the project that will serve dissemination purposes and act as a place for accessing and developing project resources.

Task 5 Identification of domain experts in relation to the various aspects of the research and identification of further potential partners.

Partners

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Sussex University:

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