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## Editorial

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For the past two decades, researchers in the fields of human-computer interaction (HCI) and interaction design for children (IDC) have increasingly acknowledged the importance of engaging children as ‘readers’ or as ‘narrators’ of multimedia stories, as a means to support learning and promote creativity and socio-cognitive development. A new research field, labelled as ‘interactive storytelling for children’ (hereinafter *ISC*)<sup>1</sup>, has been progressively created and has witnessed a rapid advancement in the past few years. A vibrant research multi-disciplinary community exists that develops innovative technologies for children to create or interact with digital multimedia narratives, explores methods for designing and evaluating these tools, and identifies theoretical foundations and heuristic guidelines.

This special issue aims at pinpointing the main advances of *ISC*, highlighting the exciting opportunities ahead, helping us to rethink this field and to reflect on the directions for the next generation of *ISC* technology and methods.

It represents one of the follow-ups of a full-day workshop held at the ACM IDC 2010 (International Conference in Interaction Design and Children, Barcelona, Spain, June 2010) and further research collaborations among workshop attendees. The purpose of the workshop was to bring together researchers from a wide spectrum of disciplines interested in the opportunities and challenges brought by *ISC*. Workshop participants who presented a particularly compelling and relevant research were invited to submit an extended version of their position papers to be considered for this special issue; the best six papers were further selected for publication, after two rounds of reviews and revisions.

As a whole, these papers provide a multi-perspective view of *ISC*, addressing *theoretical*, *methodological* and *technological* issues in this emerging discipline. A special eye is addressed to *ISC benefits for education* and *social integration* of underserved children. Challenges and opportunities induced by designing group-based

storytelling experiences or by using specific devices (e.g., mobile phones) are also explored.

The paper by F. Garzotto (this issue), ‘Interactive storytelling for children: a survey’, provides a critical analysis of past and present research in ISC along multiple perspectives (theory, design methods, and technologies) as well as the sketch of scenarios for further developments. Together with the reflections that emerge from several other papers, it can contribute to providing consistency and a firmer ground for positioning future contributions to the ISC field.

The article by F. Decortis and A. Bationo-Tillon (this issue), “‘Once upon a time, there was a fairy who walked in paradise’: the child finalised, mediated and creative narrative activity’, brings a strong *theoretical contribution* to ISC studies. The authors propose a conceptualisation of children’s narrative activity that provides an alternative to existing approaches focusing on storytelling content, structure and process. They put forward a model that emphasises the situated, mediated and creative properties of the narrative activity and conceives the process of story authoring as a series of four steps: exploration, inspiration, production and sharing. The theoretical foundations of their work draw from a socio-cultural research tradition as represented by Lev S. Vygotsky.

Two contributions specifically address the challenges and opportunities presented by ISC for *education*, and especially those raised by adopting ISC in formal education.

The paper by N. Di Blas and L. Ferrari (this issue), ‘Digital storytelling at school: what kind of educational benefits?’, addresses the *educational benefits* associated with the process of authoring interactive narratives at school. This work leans on a vast amount of empirical data resulting from a large-scale Italian project (PoliCultura), which has been running for the past six years in Italian schools, involving over 17.000 students. The project represents one of the few existing initiatives that have achieved a widespread, long-term adoption of digital storytelling tools in real scholarly contexts.

In ‘Integrating digital storytelling in formal educational settings: a design framework’, E. Rubegni and A.G. Sabiescu (this issue) propose that the greatest potential of ISC for education can be achieved by designing ISC as an educational activity aligned to the school curricula. A significant contribution of this article is ‘Digital storytelling as an educational activity’ (DSTEAs), a design framework for introducing ISC in educational settings in accordance with the pedagogical programme and infrastructural possibilities and constraints.

Two articles focus on *social issues* in ISC, with the term ‘social’ explored along multiple declinations. Approaching interactive storytelling as a *social process* brings into evidence issues related to the *dynamics of children’s participation and collaboration* and to the *context* in which multi-user storytelling activities take place. From a different perspective, storytelling activities can also be regarded as a means to promote participants’ *attitude towards social issues* or as a process that can be integrated into existing *social development programmes*.

K. Schubert and A. Weibert (this issue), ‘How the social structure of intercultural ‘come\_IN’ computer clubs fosters interactive storytelling’, show how an existing social context – intercultural computer clubs – can support interactive storytelling activities. They report from a case where an intergenerational group – caretakers and children – have been involved in the development of a common interactive story, by using video technology and MIT’s visual programming environment scratch. They discuss how these activities have encouraged participants’ reflections on their relation with the community, nurtured their sense of belonging, and enhanced their critical thinking capacities.

In ‘Digital storytelling for social and international development: from special education to vulnerable children’, L. Botturi, C. Bramani and S. Corbino (this issue) explore the potential of digital storytelling activities in the framework of *social integration and development programmes*, with a focus on children with special needs or facing marginalisation and exclusion. The article proposes digital storytelling for development (DSD), a process model for designing digital storytelling workshops in the context of education for children with special needs. The model is original for a number of aspects, addressing co-design issues with the stakeholders of development programmes, supporting adaptability issues to groups and situations, and highlighting the role of fiction as a channel for expression.

Especially in informal settings, interactive storytelling can be supported by a wide array of technological solutions for capturing, editing, exploring and sharing narratives, which go beyond the keyboard/mouse/desktop screen paradigm. J.A. Fails, A. Druin and M.L. Guha (this issue), ‘Interactive storytelling: interacting with people, environment, and technology’, take the case of *mobile* technology for supporting group story authoring. They provide concrete lessons learned while designing, developing, and evaluating ‘mobile stories’, a narrative system which allows children to read, create, and share stories on mobile devices.

With the diversity of perspectives brought together in this special issue, we hope to highlight the potential of ISC as a coherent and autonomous research and application field. Our aim is also to inspire further work to all researchers and practitioners who are interested in building methods, theories, and technologies for supporting children in relationship to digital interactive storytelling, and attempt to promote the adoption of ISC in real contexts.

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## References

- Botturi, L., Bramani, C. and Corbino, S. (2014) ‘Digital storytelling for social and international development: from special education to vulnerable children’, *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.92–111.
- Decortis, F. and Bationo-Tillon, A. (2014) “‘Once upon a time, there was a fairy who walked in paradise’: the child finalised, mediated and creative narrative activity”, *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.17–37.
- Di Blas, N. and Ferrari, L. (2014) ‘Digital storytelling at school: what kind of educational benefits?’, *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.38–54.
- Fails, J.A., Druin, A. and Guha, M.L. (2014) ‘Interactive storytelling: interacting with people, environment, and technology’, *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.112–124.
- Garzotto, F. (2014) ‘Interactive storytelling for children: a survey’, *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.5–16.

Rubegni, E. and Sabiescu, A.G. (2014) 'Integrating digital storytelling in formal educational settings: a design framework', *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.55–77.

Schubert, K. and Weibert, A. (2014) 'How the social structure of intercultural 'come\_IN' computer clubs fosters interactive storytelling', *Int. J. Arts and Technology*, Vol. 7, No. 1, pp.78–91.

## **Notes**

1 Also as 'interactive digital storytelling for children' (IDSC).