

Transforming education brick by brick?

A strategic partnership between Mary Immaculate, LEGO Education and Learn It

New technology, computers, digital information and online communication, are helping to expand the way we acquire and use knowledge in society. This is paving the way for more dynamic and effective teaching and learning experiences. Today's educators face an enormous challenge in keeping students engaged, satisfying the constant demand for higher standards in education and, at the same time, embracing new technologies. A strong emphasis on ICT and digital learning at pre-service level is one of the ways to ensure that teachers have the skills, competencies and confidence, from an early stage in their profession, to provide a unique 'hands-on, minds-on' experience that supports and enriches the entire learning process. A balance between the need to address these challenges through the potential of ICT and allowing students to exercise creative problem-solving and team-working skills needs to be achieved. We should focus on creativity and collaboration, motivation and self-direction, improvisation and discovery, and interacting with meaningful tools that expand intellectual capacities.

One such example of this approach, is a dedicated Lego Education Innovation Studio at Mary Immaculate College, Limerick – the first of its kind in a college of education anywhere in Europe. Led by the Curriculum Development Unit (CDU) and ICT/Digital Learning in the Faculty of Education, MIC, this innovative project is the result of

a strategic partnership between Mary Immaculate College, LEGO Education and Learn It (schools.learnit.ie). The project involves the development of a cutting-edge, dedicated learning space in the college and the delivery of new modules on LEGO Education for second and third year Bachelor of Education (B.Ed.) students.

The dedicated LEGO Education module is designed to facilitate students interested in equipping themselves with the skills required to use technology and a variety of methodologies to support teaching and learning. Throughout the module, students engage in a variety of student-led, faculty-led and practice-based learning opportunities, working both in an individual and group capacity, to explore theoretical and practical underpinnings of technology, creativity, and play using LEGO in education. The module also includes a strong emphasis on school-based experience and was successfully piloted earlier this year with 135 children from eight primary schools in the Limerick and Clare region. Six Limerick schools, namely Presentation Primary, Sexton Street; Scoil Íosagáin CBS Primary, Sexton Street; St John the Baptist Boys, Pennywell; St John's Girls and Infant Boys School, Cathedral Place; St Michael's Infant School, Sexton Street and St Munchin's CBS, Shelbourne Road, were chosen for the Transforming Education through Dialogue (TED), an MIC project which aims to create a connection be-



working with the LEGO!"

Her pupils echoed her sentiments describing the project as the "highlight of the year" and "absolutely amazing".

Una O'Driscoll was one of the B. Ed. students who undertook this module and praised the project saying: "I am grateful for being afforded the opportunity to teach LEGO Education. Having analysed the progress and development of the pupils who participated, it is clear that the

tween the expertise of college staff and the identified needs of schools, to address issues of equity of outcome in education. Clare based schools, Scoil Chríost Rí, Cloughleigh, Ennis and Scoil na Maighdine Mhuire, Newmarket on Fergus, were chosen and supported by Clare Education Centre as part of a European collaborative project entitled Regional Education Centres in Pedagogical Europe (RECIPE). Select classes within these schools were instructed by current B. Ed. students, in a set of theme-based robotics activities using LEGO We-Do Kits. This allowed both pre-service teachers and their host schools to explore the potential of hands-on learning to stimulate pupil engagement and expand mental capacities.

Through the development of the Lego Education Innovation Studio, a number of reciprocal benefits have already begun to emerge for the preservice teachers, practicing teachers and pupils involved. These include opportunities to:

- ✦ explore the use of LEGO Education to support teaching and learning, with a particular emphasis on science, technology and maths;
- ✦ develop new classroom techniques for the use of technology in teaching and learning;
- ✦ extend opportunities to problem solve by experimenting collaboratively and creatively with technology and LEGO WeDo;
- ✦ critically evaluate the potential of hands-on learning to stimulate pupil engagement and improve the quality of learning.

The project received glowing praise from the participating children and teachers alike with one teacher commenting on the excellence of the project saying: "It fostered a great sense of team work within the class. All my pupils were completely enthralled by this project so much so that I never had to correct them when they were

programme is innovative, educative and worthwhile. It proved to be an excellent, well structured, cross curricular aid which helps to develop creative and practical ICT skills in a highly enjoyable manner."

Another B. Ed. student who spoke highly of the project was Darragh O'Connell who said; "In such a technologically-driven environment, it is getting more difficult for teachers to engage and motivate students in the primary classroom. LEGO Education is special as it allows students of all abilities and backgrounds to get involved and to be part of a team in an interesting, fun and worthwhile manner. From my experiences with the programme, I would be delighted to have the opportunity to utilise LEGO Education to develop and enhance students' life-long learning skills and to help them to reach their full potential."

While this LEGO Education Innovation Studio project is very much in its infancy,

Mary Immaculate College aims to consolidate and develop the concept over the coming years. Areas of particular interest include certified professional development, the roll-out of a wider range of educational equipment such as *Story Starter* for language development and EV3 for senior primary robotics, working closely with Learn It to support robotics camps for primary pupils and the offering of professional development for partner schools and the wider teaching community. In the words of Ole Kirk Christiansen, founder of LEGO, "only the best is good enough" and it is hoped that all of these efforts will feed into the development of an innovative 'learning space' at Mary Immaculate College to research, develop and showcase the best of ICT-related pedagogy.

MARY IMMACULATE COLLEGE, Limerick
www.mic.ul.ie

Launching the project

Speaking at the recent launch of the LEGO Education Innovation Studio, Prof. Michael A. Hayes, President of MIC, said; "The LEGO Innovation Studio marks a significant investment by Mary Immaculate College in three main elements – equipment, training and the learning environment. In recognising the increasingly powerful role that digital technologies can play in boosting teaching and learning across the curriculum at all levels, and in recognising the benefits for the future of the entire country of ensuring that, from a young age, our children can develop a fluency in thinking, working and creating in a digital environment, Mary Immaculate College is proud to be an active and passionate partner in the pursuit of that goal."

Officially launching the project at Mary Immaculate College, Dr René Tristan Lydixsen, Managing Director of LEGO Education Europe, said;

"The Mary Immaculate College LEGO Education Innovation Studio offers an inspiring environment for all teachers and especially for teachers in training. LEGO Education provides a unique experience for educators and students that combines relevant curriculum, the LEGO system of bricks and our unique principles for teaching and learning. Through this approach, we are transforming education to help teachers produce successful students who are life-long learners. We have found that the LEGO Education Innovation Studio environment is a great way to help teachers put these learning methods into practice."

As well as officiating at the launch, Dr Lydixsen presented certificates to the 27 third year Bachelor of Education (B.Ed) students who completed the elective module in LEGO Education, delivered by Rory McGann and Brendan Barry, Lecturers in ICT/Digital Learning.



Pupils from Scoil na Maighdine Mhuire, Newmarket on Fergus



Pupils from Presentation Primary, Sexton Street, Limerick



Pupils from Scoil Íosagáin CBS.



Pictured at the launch of the LEGO Education Innovation Studio were: back row LR: Fiona O'Connor, TED; Eucharía McCarthy, Director of CDU; Ann Higgins, TED; Josephine Frahill, CDU; Dr Sandra Ryan, Chair of TED; Brendan Barry, lecturer in ICT/Digital Learning; Pauline Maguire, LearnIt; Gary Jones, LEGO. Front row: L-R: Ruth Bourke, TED Coordinator; Ross Maguire, LearnIt; Rory McGann, Lecturer in ICT/Digital Learning; Dr René Tristan Lydixsen, Managing Director of LEGO Education Europe; Prof. Michael A Hayes, President of MIC; Mayor of Limerick, Cllr Kathleen Leddin; Una O'Driscoll and Darragh O'Connell, B Ed students.