

HUNDRED REPORT #038

Spotlight on Gamified Curricula

Report

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HUNDRED SPOTLIGHT ON GAMIFIED CURRICULA

Photo by EMC² Learning

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SPOTLIGHT ON GAMIFIED CURRICULA

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Foreword by
Deborah Mensah-Bonsu, Supercell

The Power of Play

At Supercell we have the dream of creating great games that as many people as possible play for years and that are remembered forever. We believe in the power of games to connect people all over the world through play, events, communities and content. In the entrance to our Helsinki studio, visitors are greeted by a colourful map of the world glowing with lights blinking in tandem with millions of people playing our games in locations all across the globe.

Still it's not lost on us that some locations are blinking more brightly than others, that the ability to play games like ours and make games like ours varies greatly depending on who you are and where you are. Through our philanthropic arm called Give Back, we try to remove some of the barriers and provide access for others to join us. We believe education is one of the great equalisers and as a company rooted in Finland, a beacon for quality education, many Supercellians have experienced those benefits first-hand.

Supercell and HundrED share a long-time partnership stemming from a shared passion for supporting and accelerating quality education. If education is an equaliser, gamification is the accelerator. Over the last

decade, Supercell has supported initiatives both in Finland and globally, ranging from our free Helsinki-based coding school Hive centred around a gamified curriculum, to play-based accelerated learning programs in Ethiopia and Uganda.

Games create a sense of belonging – of community, empathy and teamwork. They can help us find our footing on the 3rd rung of Maslow's Hierarchy, and from there propel us upwards, fostering self-esteem, creativity, self-expression, problem solving, all the way up to better decision making, critical thinking, strategy and leadership.

Games are not passive, they give us agency. That means there's a greater ability to learn new concepts and systems and try things out and fail and try again, to see failure as a means of progression, not the end game.



Photo by Stages of Autonomy

What if school were a game? This is the central theme we wanted to explore with this Spotlight. We had three main goals:

1. Have a better understanding of the latest and best innovations in gamified curricula, especially amongst secondary/post-secondary students.
2. Gather guidance for existing programs like Hive, as well as new projects we may spearhead to fast-track underrepresented talent into industry
3. Discover innovations that blend the physical and digital for greater access.

Through the process of this Spotlight we learned that despite its existence for more than a decade, gamification is still new ground. We're excited to continue to explore its full potential.



Deborah Mensah-Bonsu

GIVE BACK
SUPERCCELL

Foreword by
Lasse Leponiemi, HundrED

The Search for Gamified Curricula

Playing is a natural and fun way of learning from early childhood through the elderly years. Yet somehow, we often seem to lose the ability to immerse ourselves completely in a moment. The older we get, the more challenging it can be for us to find time for playing - we begin to see play as unproductive while navigating our task lists.

When reading about the science of learning we find multiple examples of how playing can activate our learning. Play can open us up to thinking and trying different ways, which fosters the kind of creativity that can lead to those “a-ha!” -moments. There are a lot of learning games doing this very well, but in this particular Spotlight we wanted to look beyond those to understand how we can use play, or concepts used in different games, to create encouraging learning environments for students and their teachers.

We found that the task was more difficult than we first anticipated. There are hundreds of learning solutions, applications and games available, but they often focus on single subjects or skills like language learning

or mathematics. There are even fewer of these that have incorporated gamification within a larger and wider learning environment.

There are solutions that utilise leaderboards or scorecards to showcase student learning, but these features often promote a linear approach to learning, and they are widely used on different learning management systems. For the context of this Spotlight, we did not see these as innovative enough, or pedagogically encouraging. In contrast, they actually might negatively impact learning, as learners that are not succeeding can find the results demotivating.

We wanted to understand how some forward-looking innovators have embedded gamification with their pedagogical approaches, self-paced learning and facilitation within the whole school community. Therefore we went to look for models which provide a pedagogically sound framework to support the learning process in a gamified way.



Photo by Change Architects

However, innovators pointed out that their models were not always easily compatible with the formal curriculum for a few reasons - such as crossing subject barriers - and when educators facilitate learner accountability, it can conflict with the lesson guidelines within the context. In the last chapter you can read more about our suggestions for enabling environments for gamification as well as the kinds of preventative barriers we identified.

Even though there might be some unsolved challenges for scalability, we found that learning impact and student engagement are still high with the selected innovations. We believe that gamified curricula can bring together play, edtech solutions, and self-paced learning in the school environment and these innovations pave the way for those who really want to promote gamification on a systems level.



Lasse Leponiemi

EXECUTIVE DIRECTOR
HUNDRED

Introduction

Already well into the second decade of the 21st century, we see rapid shifts in the education landscape as technology becomes a big part of school. Technology has vast implications on pedagogy; teachers are constantly adapting, learning new methods and approaches to engage today's youth. Similarly, curriculum development has evolved to reflect an increasingly global educational landscape. International entities like the World Bank and UNESCO, as well as organisations such as Education for All (EFA) have taken the role of setting international education agendas with respect to curricula¹: this has resulted in an evolution in which we have seen at least a theoretical, if not practical, move toward learner-centred, contextualised curricula that pays attention to the needs of every learner.

So, what kind of familiar method can educators use to contextualise the curriculum while remaining learner-centred? Gaming, which began taking hold in the 1970s, has influenced everything from buying coffee to daily exercise. It is no surprise that it has also become a major educational tool. Roger Tirazona, the Head of Department in Ethics Education in Malta's Ministry of Education, calls on John Dewey and Paolo Freire when he highlights the importance of bringing games into the educational space in a much more intentional way.



Photo by Enterprise Adventure

Gamification needs to complement our educational system in order to improve it, improve quality and standards, as well as get more children excited about their learning journey. We need to explore the creation of tailor-made tools for our curriculum... Education Officers and their teams, need to provide more up-to-date professional development to promote and adopt the use of innovative emerging technologies such as gamified learning in their subjects.²

Using a rigorous selection process developed for Spotlight projects by HundrED's Research Team, Supercell and HundrED curated 12 innovations that highlight Gamified Curricula as a method for motivating and engaging learners living in an age that demands creativity and flexibility in the face of volatility, uncertainty, complexity, and ambiguity. The innovations in this collection are representative of different cultures and contexts, ranging from high- to low-tech in format. Their commonalities reflect the admirable goal of making education more fun and learner-centric.

In the report that follows, we situate gamification in the broader context of game- and play-based learning, clarify our Spotlight's goals, and provide a description of each selected innovation. Data from the HundrED Advisory Board review process gives us an understanding of each innovation's alignment with the key measurements of impact and scalability, as well how they use gamification as a core component of their curricula.

Finally, we share recommendations and reflections from the innovators themselves, collected from their interviews with our Research Team, as well

as insights from education gamification specialists. These observations provide a window into what is driving the future of the gamification of curricula and its potential to change the learning landscape for years to come.

SUPERCELL

Supercell is a game company based in Helsinki, Finland, with offices in San Francisco, Seoul and Shanghai. Since its launch in 2010, the company has brought five games to the global market: Hay Day, Clash of Clans, Boom Beach, Clash Royale and Brawl Stars. Supercell's dream is to create games that as many people as possible play for years and that are remembered forever.

→ Visit their website at: supercell.com

HUNDRED

HundrED is a global mission-driven organisation transforming K12 education. Its mission is to give recognition and visibility to practitioners who are driving innovative, impactful, and scalable approaches in education all around the world. At HundrED, we believe that through identifying, amplifying, and facilitating the implementation of education innovations we can transform education systems, equip students with the skills to thrive as global citizens, and ultimately help every child flourish. HundrED Spotlights are organised with partner organisations, who help from their area of expertise. Spotlights are unique opportunities for both educational professionals and independent organisers of the Spotlight to gain a thorough insight into the education innovations taking place in either a specific area of education and/or within a certain geographic region. For each Spotlight, HundrED accepts applications from the brightest innovations in education, which then undergo a thorough evaluation by our Research Team in collaboration with partner organisations and an expert Advisory Board.

→ Visit our website at: hundred.org

HundrED's Mission

HUNDRED'S MANIFESTO ON GAMIFICATION

HundrED's goal is to help improve education and foster a movement through encouraging impactful and scalable innovations to spread across the world, while staying mindful of context.

We believe that the purpose of education is to help every child flourish, no matter what happens in life.

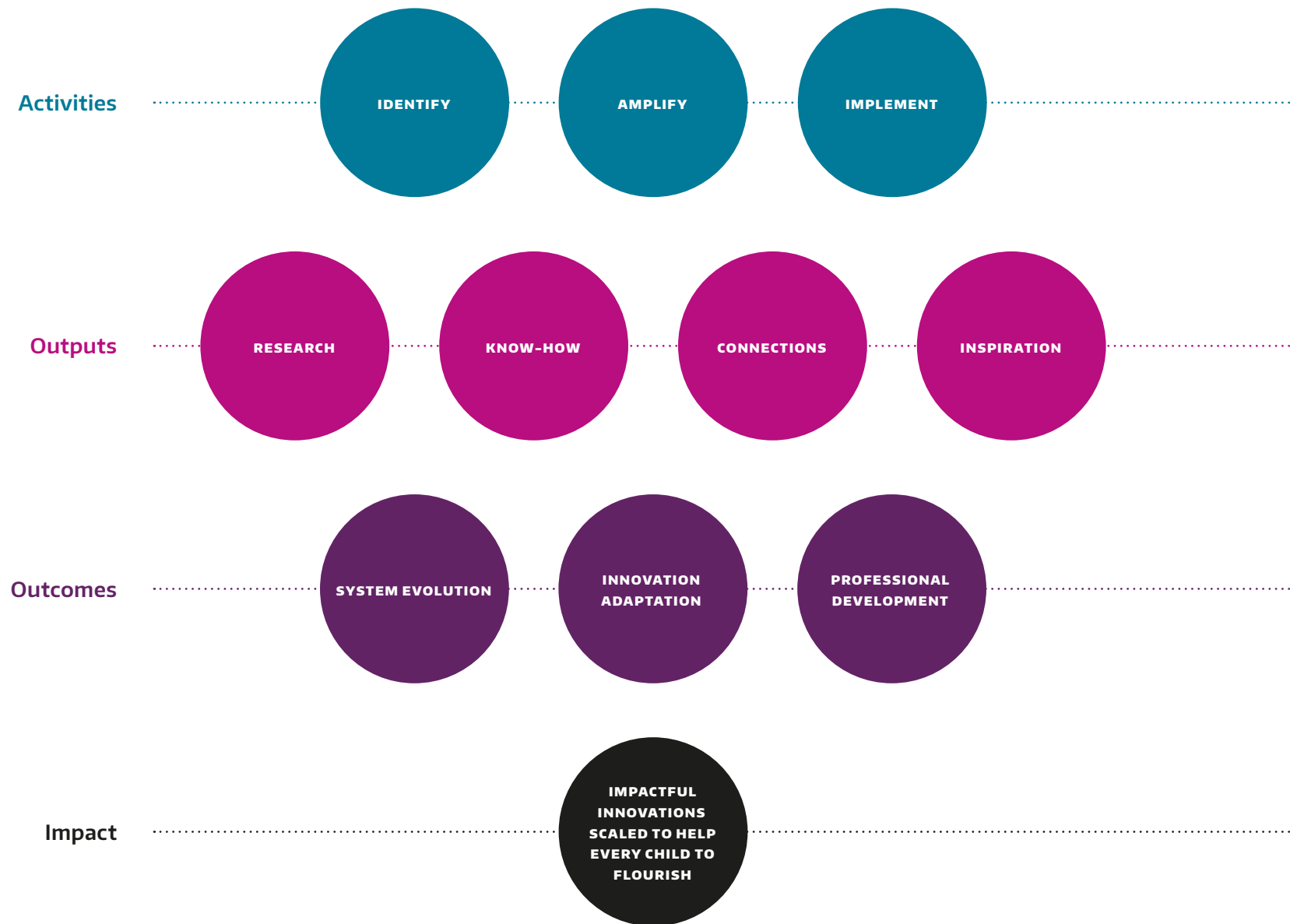
In a fast-changing world, focusing on traditional academic skills will remain important, but that is not enough. To thrive as global citizens, children must be equipped with a breadth of skills. We assert that gamification can assist educators in motivating and involving learners more deeply and engaging them in their own learning. While we are advocates of a child-centric approach and personalised, passion-based learning, the relationship between an inspired teacher and a motivated student will remain essential.

Assessment has to be aligned with the core purpose of helping children flourish and all of this should be reflected in the learning environments of the future. Gamification should be used as a tool to facilitate personalised and joyful learning experiences for children, and support teachers in

accommodating learning needs of different learners. To offer benefits to every child, gamified curricula should be used appropriately to ensure accessible, available, and affordable education to all children.

To make this happen, we need visionary leadership at every level of our education system with ambitious, impactful, and scalable education innovations that are effective globally. The world of education is full of hardworking specialists who are making this happen every day. Our mission at HundrED is to give them the recognition and visibility they deserve.

HUNDRED THEORY OF CHANGE



Chapter 1

Towards a Gamified Curriculum

GAMIFICATION

Games have always been an integral part of human civilisation. For as long as we have been teaching and learning, games have served as a means to make information more accessible and digestible for learners. The concepts of play and education have coexisted side-by-side and in concert. Game-based learning, a 20th century concept which can be traced back to the work of 17th century educational theorist John Amos Comenius, ultimately derives from the assertion that “games/play [should] be fully integrated with the learning process.”³ Game-based learning appropriately employs games as a means by which learners can practise new skills, and, over time, demonstrate understanding and mastery of concepts.

Gamification, however, is different from game-based learning. The term came into educational discourse in 2010, although the concept was developing for at least a decade prior (if not longer).⁴ Over that time, the definition solidified, with scholars generally agreeing on this very succinct description:

Gamification is the use of game elements in a non-game context.

Through this use of game elements, gamification aims to make mundane or mandatory tasks more enjoyable.⁵ Studies of gamification in higher education demonstrate links between gamification and increased learner motivation and engagement. While the literature is not as substantive for K12 education, there are a number of localised studies that have been conducted more recently which show that this linkage also exists for young learners.⁶

Beyond motivation and engagement, we contend that gamification does something far more important. In a modern sense, gamification is closely linked to the gaming world, both physical and virtual, low-and high-tech. And in this culture of gaming, losing is not always a dead end. Players are encouraged to make mistakes and try again, as many times as necessary, to reach a desired outcome. They are put in a position where they must come up with creative solutions. As Sir Ken Robinson said in a landmark TED Talk in 2007, “What we do know is, if you’re not prepared to be wrong, you’ll never come up with anything original...we are educating people out of their creative capacities.”⁷ The aim of gamification is to reverse this trend. By creating a culture of resilience, gamification cultivates creativity.

WHAT DOES IT MEAN TO USE GAME ELEMENTS IN A NON-GAME CONTEXT?

If we look at the most basic aspects of a game - for example, the awarding of points and designation of winners - we ignore the nuances and complexities that make gamification so much more than just extrinsic gratification associated with playing games. During HundrED’s webinar, “What if School Were a Game?: Global Roundtable Discussing Gamified Curricula,” Ash Brandin, a panellist and teacher in the United States, spoke specifically to the psychological aspects of games, noting that these are what fascinate us. Brandin, who incorporates game-elements into their music class, highlighted that it was about encouraging cooperation and disengaging the game elements from the students’ grades that was essential to truly gamifying.⁸ In 2011, noting the way in which gamification was not only infiltrating everyday life, but also on its most basic level the way the educational system is set up, Sarah Smith-Robbins, the Director of Emerging Technologies at Indiana University Bloomington, warned of the tendency to make gamification about “pointsification,” badge-earning, and levelling up, which place emphasis on the game rather than the content, outcomes, and experiences.⁹



SIR KEN ROBINSON AND THE ROLE OF THE TEACHER

[→ Watch the talk on HundrED YouTube](#)

She went on to suggest that, in order to be more meaningful, gamification should focus on bringing attention to the following:

- establishing alignment of clear expectations and goals for the learner;
- maintaining transparency and learner-centredness; and
- reflecting on the creation of and personalising the gamified experience.

While Smith-Robbins spoke from the perspective of higher education and adult motivation, researchers at the Brookings Institute's Center for Universal Education (CUE) viewed gamification as a method by which lagging K12 educational systems can “leapfrog,” or create “transformative shifts rather than incremental evolution as educators harness the power of innovation.”¹⁰ Gamification assists these shifts, because it can lasso the learner’s flow-state through “inclusion, experimentation, and immersion.”¹¹ And while game mechanisms like badges and leaderboards are good at building motivation, more important to CUE’s experts are the aesthetics and story components of gamification. Storytelling assists in creating the flow-state, and is essential for leapfrogging, as it “broadens the range of pedagogical practices related to teacher talk; [it revalues] proficiency in oral expression and comprehension as a fundamental pedagogical tool.”¹² Learners are immersed in the story, which “can build community among students and teachers, enhance memory recall, support early literacy development, and promote creative thinking.”¹³

These foci point to the “why” of gamification of education beyond motivation and engagement. Where educators continually reflect on and personalise gamification, it leads to learning that is experiential and contextual. And when educators successfully align expectations and goals in the gamified environment, it becomes a way for them to connect knowledge, skill, and assessment within a curriculum.

CURRICULA

The “what” of education is found in the curriculum that students are expected to learn, and that educators, using pedagogical devices, will teach. We look to Michael Young’s analysis of curricula. From a sociological perspective, “curricula are ‘social facts’ in the sense used by... Emile Durkheim,” and simultaneously serve as opportunities and constraints for specific goal achievement.¹⁴ For Durkheim, a social fact is something that “constitutes the beliefs, tendencies, and practices of the group taken collectively.”¹⁵ Curricula behave much like other social institutions, which exist for specific purposes. The purpose of curricula is to parse out knowledge, and that knowledge, in turn, influences future curricular development. Not only this, but curricula allow learners to “move beyond the experience they bring to school and to acquire knowledge that is not tied to that experience.”¹⁶ In this way, curricula are both created by and shape our social experience, in and out of school.

Holding that curricula, on a very broad level, serve a purpose of organising the dissemination of agreed-upon information to learners of all ages, we acknowledge that those who decide the content of and develop these curricular institutions hold power within an educational ecosystem. This power influences the subject matter included in a curriculum, and, because curricula and pedagogy are closely linked, how that information will be imparted to learners. In writing about curriculum design, Jan van den Akker takes a simpler definition of curricula– “a plan for learning” – before delving into the very complex interaction of the levels of curricular development, from the supra (international/comparative) to the nano (classroom).¹⁷ It is here where we can start to see the challenges to developing gamified curricula.



Photo by Seppo

GAMIFYING THE CURRICULA

Gamification gives educators tools with which to make the classroom experience more motivating, inspiring, and meaningful. It might look like learner-centred experiences that require pupils or students to achieve milestones before moving on to the next level, as in Stages of Autonomy, one of the selected innovations originating in Spain (see more about this innovation on page 54). Stages of Autonomy is a program that spans several years of lower secondary school. It was created by the Learnlife organisation in response to cohorts of young teachers facing the challenge of working with a diverse student body who were coming to Barcelona from all over the world. To address the relative gaps in students' individual autonomy, or ability to self-manage academic and non-academic aspects of school, they created a rubric-based program applicable to any subject area that would help learners to evaluate their own capabilities. In this way, young learners' metacognition and ability to self-manage are developed as skills for future development in everyday life.

Gamifying curricula can also take the form of collaboration driven by important issues, whether local or global, as in Lumi Network, an edtech innovation that requires learners to use their problem-solving skills by working with others, often from other parts of the world. They create real-world solutions to self-identified problems in the realm of UN Sustainable Development Goals. Prototyping solutions for the future is the ultimate destination for participants (learn more about this innovation on page 48). Digital Influx Academy instructs students in user experience (UX) design, emphasising empathy and agency--crucial qualities to nurture in a digital era, not only in virtual spaces but also in the physical world (read about this innovation on page 38). Enterprise Adventure also aims to encourage the agency of young people through entrepreneurship. By experiencing the journey of an entrepreneur through the gamified curriculum, learners grow their critical thinking and design skills (find this innovation on page 42).

No matter its appearance, gamifying an entire curriculum is something that requires intentional effort extending beyond the traditional, and in some cases, tried and true system. Taking the information that learners need to know and repackaging it within the framework of gamification means that educators must understand how game elements work and where they best fit. This need is filled by innovators like those at

EMC² Learning, where two educators have spent years creating tools and professional development for teachers who want to gamify their classrooms (learn more about this innovation on page 40). It can also be filled by communities of practice, as in Change Architects, where the teachers have joined together to work on the design of that program (learn more about this innovation on page 34).

THE PURPOSE OF THIS SPOTLIGHT

Given its potential for motivating and engaging learners and teachers alike, HundrED and Supercell have teamed up with the aim of bringing attention to and curating education innovations that gamify curricula. Our assertion is that gamification should be used more systematically, not just in individual lessons, or as a reward for hard work or tasks accomplished. We also see the potential for gamification to create innovative learning environments for learners aged 16-25, especially those from marginalised groups: low and middle income countries, girls and LGBTQ+, and those who may need support with wellbeing. These demographics are often difficult to reach, and the gaming industry acknowledges this particular challenge.¹⁸ Code Mitra's mission is to bring gamified coding to the gullies of India, and does so via cell phone to increase access (learn more about this innovation on page 36). NASEF's Scholastic Esports' curriculum is completely free and open source, and is a program that encourages all interested learners, even those who prefer not to play games, to participate in maintenance of the club (read about this innovation on page 50). Games and Hands-on Activities employs in-person sessions to bring gamification to the after-school environment and play opportunities to classroom settings (find this innovation on page 44). Seppo, an application that allows teachers to create lessons outside of the classroom in virtually any space, also supports them in developing learning journeys for students with disabilities who may require special scaffolding (learn more on page 52). Merging the physical and the digital, as these innovations do, helps with accessibility.

Another main reason for this Spotlight on Gamified Curricula was to fill the need for systems modelling that can serve as guidance for educators and administrators interested in implementing gamification in their classrooms and schools. And while playing games is commonplace in the classroom, additional supports are necessary for the gamification of curricula, and there are some specific challenges that must be addressed for it to truly take hold.



Photo by The Loop and Fammi vedere La Luna

CHALLENGES TO GAMIFYING CURRICULA

If we revisit the idea of curricula as social facts in a Durkheimian sense, we immediately run into one of the main obstacles that gamification of curricula faces: curricula, as social facts, cannot be questioned, changed, or overcome, without making “their constraining power sufficiently felt in the resistance that they afford. There is no innovator, even a fortunate one, whose ventures do not encounter opposition of this kind.”¹⁹ In this, gamifying a whole curriculum presents a challenge that is systemic as well as individual.

Developing any kind of curriculum requires support from the education ecosystem, whether on a nano (classroom) or supra (governmental policy) level. van den Akker explains the complexities from a policy perspective:

In order to understand problems of curriculum decision-making and enactment, a broader description is often most appropriate: usually a long and cyclic process with many stakeholders and participants; in which motives and needs for changing the curriculum are formulated; ideas are specified in programs and materials; and efforts are made to realize the intended changes in practice.²⁰

This cyclic process is additionally complicated by the socially implied intricacies of curriculum design, in which we must consider the different faces that one single curriculum can take. Within a mathematics

curriculum, for example, there are prescribed, implemented, hidden, forgotten, and achieved curricula that exist within this single institution. These multiple faces of a curriculum must be negotiated by all parties involved in its development and implementation.²¹ And although they are expected to teach the prescribed curriculum, teachers are not always key actors in its development.

Within the classroom, teachers and educators must have the materials, the supports, and the knowledge base to implement gamification. This is a more practical question: how can teachers use the available materials, supports, and knowledge so that gamification is actually effective? Harvianen and Meriläinen write about these difficulties, noting that inauthentic and oftentimes ineffective gamification is like “chocolate covered broccoli,” enticing or even manipulating learners to be engaged and motivated by game elements that frame the subject matter.²² This was also a challenge acknowledged by Dora Palfi, co-founder of imagiLabs, whose innovation, imagi, takes a game-based approach to its curricular design (see page 46 for more information about this innovation). Palfi, like Harvianen and Meriläinen, acknowledges that finding a balance of difficulty, engagement, and reflection, all layered over educational content, requires specific skills on an educator’s part.

The students’ and families’ experiences and preconceived ideas about gamification can also present a practical challenge to those innovators trying to design gamified curricula. For example, the innovators who developed ‘The Loop’ and ‘Fammi vedere la Luna’ (see page 56 for more information about this innovation) were working with young people in juvenile prisons. Getting the materials for gamification into the juvenile prisons was almost impossible, and they had to find creative ways to make substitutions. After overcoming those barriers, they were able to work collaboratively with the young people to further iterate on their escape room-based Social Emotional Learning (SEL) curriculum. This lack of access to materials – whether due to restrictions, financial constraints, or infrastructural inadequacies – is something that the selected innovators have had to take into consideration when developing their products and programs.

ENABLING ENVIRONMENTS FOR GAMIFYING CURRICULA

Although not a selected innovation, one of the inspirations for this Spotlight project was Ecole 42, a non-profit, tuition free, “professional integration program” that has scaled to 31 countries since it was founded in 2013 by Xavier Niel. Niel, a French luminary in the world of IT education, wanted to raise France’s position in IT and coding, as well as bring marginalised groups into the profession. He and his colleagues created an experience in which learners are self-directed and collaborate to complete projects that help them to develop coding skills.²³ In an interview with the World Economic Forum, Nicolas Sadirac, the head of school at Ecole 42 from its inception until mid-2018, “describes it [Ecole 42] as World of Warcraft, but where dungeons have been replaced with digital projects.”²⁴ While the program has evolved to more authentically reflect its founders’ vision, the core gamified elements remain: teacher-free, self-regulated, project based, collaborative learning, using peer evaluation and fail-to-learn challenges to help students level up over the course of approximately three years.²⁵ Points and rewards, while used to enhance the experience, are not the motivating factors; 42 students are selected for their inherent intrinsic motivation.

While Ecole 42 is a private organisation benefitting from all the necessary supports for success, from financial backing to learner-level motivation, it is not the only model for a fully gamified curriculum. Another example of gamification that we found in our research was Quest to Learn, which is a whole school model in New York, USA. It is a public school serving learners in grades 6-12. Funded in part by the MacArthur Foundation, Quest to Learn’s curriculum was developed in collaboration with game designers at the Institute of Play, and consists of larger Missions made up of mid-level Quests, which in turn are made up of lessons.²⁶ Within this framework, learners play specially designed games that tap into elements of storytelling, role-play, testing and iteration, and personalised learning experiences.²⁷ As we can see, Quest to Learn exists with the support of the Manhattan Public School System in New York, with extra funding from outside sources, a dedicated curriculum design and development team, and buy-in from the teachers in the classrooms.



Photo by Stages of Autonomy

While these whole-school models are representative of ways in which gamification of curricula can work successfully, they point to necessary scaffolds for any innovative practices:

Organisational support from the supra to nano levels

- Policymakers' or Stakeholders' buy-in
- Funding, whether public or private
- Curriculum design

Capacity

- Educator buy-in
- Educator knowledge and skills
- Time to implement strategies



HIVE

Developed in the image of Ecole 42 by Supercell, Hive, a Helsinki-based coding school, prides itself on its collaborative environment and peer-to-peer learning structure. As the first such gamified coding school in the Nordic region, one of Hive's main goals has been to increase interest in coding by presenting a more diverse understanding of the coder profile.²⁸

Hive has a unique way of organising their curriculum. They have mapped the programming skills needed in concentric circles and nodes, with mastery of one skillset unlocking the possibility to study the same skills at a deeper level. Once certain skills are mastered in one node, the next node is opened, until the next circle of courses or skills development unlocks. In this way, students can take a unique path to developing their capacity as programmers. Many games use this same kind of questing or skill trees for rewarding progression.

→ Visit their website at: hive.fi

Chapter 2

Collection of Voices

The promise of gamification to revolutionise learning is a global discussion. Gaming enthusiasts who have informed HundrED's research on gamification belong to important education stakeholder communities, such as: teachers, learners, innovators, and academics. We asked them to respond to several questions about the impact of gamification on education, and their diverse range of perspectives provide a backdrop for the showcase of selected innovations that follow in Chapter 4.

1. WHY GAMIFICATION?



"Play is our brain's favourite way of learning. Gamification helps teachers to empower students by giving them the voice, choice and agency."

– Namya Joshi, Minecraft Mentor, HundrED Youth Advisory Board



"I wanted the things that I like most about video games - that my students like most about video games - to be helping them in our music classroom. Whether kids are aware of it or not, often the things we like most about games are the psychological structures. And when we think about that, a lot of those align with best pedagogical practice and best educational practice. It's another way of aligning with best practice. How do I make learning better, how do I make it more engaging?"

– Ash Brandin, The Gamer Educator



"Gamification is not limited by tech! It's about gathering inspiration from games. We go to the places where the kids play and see what they're doing. Understand their interests and design learning in a way that helps them want to engage."

– Rob Alvarez, Founder, Professor Game



"So I think a lot of learning, that is subtle, is not put out there because that's how the education system works in India. It's very one-sided, it's very driven by pressures whether that's from the teacher or culturally now that might translate into scores but is that really learning? So the idea of gamification [in Code Mitra] comes from there. How do you sort of make it subtle and for kids to engage in a way where they feel like they're learning? And the other layer was of course if you make it culturally relevant, it's not alien then."

– Shoaib Dar, Founder, Pi Jam Foundation, Code Mitra



"For me, gamification is all about the best parts of what we strive to do every single day in our classrooms. By applying simple game-like mechanics and game-inspired course design to the way that we approach the work that we do, we help teachers incentivize age-appropriate academic risk-taking, forge meaningful relationships between themselves and their student, infuse content knowledge and creativity at every new step along the journey, and inspire the young people that we teach to chart bold new courses and become the heroes of their own educational adventure."

– Michael Matera, Co-founder, EMC² Learning



"Storytelling is key to UX and this is why we have created gamified curriculum that is linked to a comic book series that interacts periodically through the learning experience. Character development through our course engages in social emotional learning creativity and innovation through the lens of the UN SDGs."

– Suj Premachandran, CEO, Digital Influx Academy



"If you join a game, you need to be an active player. In terms of learning, you need to take an active part in the learning process. So that's the best part of gamification: We want to make a really interactive learning process. There are many game features that really encourage the players to move forward in the learning process."

– Riku Alkio, Founder and CEO, Seppo



"The gamification component was that we needed to put Stages of Autonomy into a structure that the kids could understand. So that in this game, the game was ultimately a journey, where they could actually manage and control themselves where they wish to be in terms of gaining autonomous learning skills, having the confidence, and ultimately heading towards a place where they're completely able to then create their own learning schedule, no matter where they want to go."

– Stephen Harris, Co-Founder, Learnlife



"Human beings are more and more engaged in play-like activities, so we should develop contexts and scenarios that are related to playful activities so that students can enjoy, and in between they can learn the things. Create play, it will help you to learn things."

– Anant Bhaskar Garg, Director, HaritaDhara Research, Games and Hands-on Activities for Future Ready Maker Education in 21st Century



"This different way of working, through the game, can simulate real situations and encourage a different look at one's own condition which can be imagined and therefore modified first in the game and then in reality."

– Raffaella Vitelli, 'The Loop' and 'Fammi vedere la Luna' (Show me the moon)



"Whatever educational outcome you're trying to deliver, gamification is about making learning fun. When you're working with young people, you're trying to set them up for life...we owe it to them that learning is an enjoyable experience, and that's something that gamification tries to achieve."

– Draego Zubiri, Enterprise Adventure



"The beauty of games is that they teach progression and help learners adopt behaviours in safe spaces. Those are the parts that can really change the way we learn. The freedom to fail, try again and learn new concepts and then progress; progression towards mastery."

– Deborah Mensah-Bonsu, Supercell

2. WHAT ARE SOME CHALLENGES TO GAMIFICATION OF CURRICULA?



"The simplest application of gamification is often one-size-fits-all: adding points, badges, and leaderboards. However, what motivates learners differs widely, and content does not always lend itself well to this structure. Gamifying in the wrong way can have negative impacts, but when set up well for a particular audience, purpose, and setting, it can be supportive and motivating. Gamifying well requires a lot of design thinking that is often overlooked."

– Dr. Brooke Morrill, Senior Director of Education, Schell Games



"In the beginning, I have to say it's hard because Romania has a system where the teacher is the Know It All person that usually sits in front of the classroom. They should be knowing all the answers and giving everything to students. This is the learning process for teachers, for them to trust their students and trust themselves and the design thinking process. Once they accept this mindset shift, they become relaxed in relief that we have to prepare activities, but we don't have to have all the answers and we can discover and have fun together with our students."

– Madalina Bouros, Co-Founder and President, AllGrow, Change Architects



"We're trying to model what good pedagogy needs to look like and then create a space where people feel confident. I think through traditional pigeonholing for us has been teachers think about teaching as five to nine days of direct instruction, one day of game-like review, and the game is fun, because the kids have earned a game day, the Fun Friday, then they get the test. And we're right back to that same system. What we are trying to do is move away from Fun Friday, we're trying to move away from this didactic teacher talk model. That is a national discourse to say no, an engaged student body is an empowered student body."

– John Meehan, Co-founder, EMC² Learning



"Esports is something new and unknown and scary, especially to the more established seasoned professionals who may not be technologically savvy or gamers. And it takes some education and awareness and understanding as we talk with schools, programs, teachers, etc. So we're very fortunate in that we are usually working with first adopters, people who say, 'Oh, I've heard of your work, my kids love Esports and gaming. And I'd like to know how I can take advantage of that.'"

– Gerald Solomon, Founder and Executive Director of NASEF's Scholastic Esports



"Before we began our program at the juvenile detention center, we were presented with multiple barriers and prejudices such as low literacy or high level of distraction. This made us uncertain whether the young prisoners were going to be engaged the whole time. However, when we introduced the Escape Room, we were surprised about how much they enjoyed participating in the game. Despite initial doubts, they actively participated because the game spoke to them on a universal level. They felt included in the experience and immersed in the story. Like many serious games, our main challenge was finding the right balance between entertainment and delivering meaningful messages in a way that kept them engaged."

– Claudia Zampella, 'The Loop' and 'Fammi vedere la Luna' (Show me the moon)



"The main challenge of gamification of education is lack of support to implement in classroom settings, especially those having large numbers of students, requiring more resources, and time. Teachers feel more time and preparation is required for gamification."

– Dr. Manisha Agarwal, Director, HaritaDhara Research, Games and Hands-on Activities for Future Ready Maker Education in 21st Century



Photo by imagi

3. HOW DO EDUCATORS AND LEARNERS RESPOND TO GAMIFICATION?



"In our app, and curricula, every time we have an activity, you're going to end up with some kind of visual outcome. And so that is a game in itself, like knowing I'm creating a project. And in the consumer app it's a surprise what you're actually coding. This is what makes the project intrinsically motivating."

– Dora Palfi, Co-Founder and CEO, imagiLabs



"We're taking something that is thought to be not accessible and making it accessible to someone outside of the demographic. The program is personalised to her. By the end it's something the learner is really proud of. Though it's online, the project is something you can hold in your hand. It's something we've seen again and again. That couldn't have been achieved without the gamification. If it had been a traditional course, I don't think we would have seen these results at all."

– Elizabeth Medhurst, Enterprise Adventure



"The Australian national curriculum includes the infusion of digital skills for design thinking. Children enthusiastically embrace this change, contributing innovative ideas. Educators observe a decrease in behavioural issues, attributing it to heightened engagement. Our gamification approach serves to solidify learning after completion of each core module, enhancing the overall educational experience."

– Kelly Pfeiffer, Director for Design Education - Digital Influx Academy Australia



"Some learners may be reserved or hesitant, and they fear making mistakes. By transforming your lesson plan into a gamified format using Seppo, you have the opportunity to tailor the experience to each student's unique needs as they engage with tasks. Creating various learning paths allows students to see mistakes as a part of the game. This fosters a sense of curiosity about what comes next. The platform provides a safe environment, where students receive positive feedback consistently. Even mistakes are valuable, as they lead to exciting things in the learning journey. The learning process becomes an adventurous and positive experience."

– Anna-Mari Jääskeläinen, Support Specialist and Trainer, Seppo



"From young people the single biggest feedback is, this is the only place where I feel like my ideas are not judged...I did not believe that my ideas or my thinking would be taken seriously. This is the only place where I'm not told. But I'm asked."

– Prashant Raizada, CEO Lumi Network



"During activities at the juvenile detention center, there were also youths that weren't completely engaged in the game, which is typical. However, we collected feedback to improve the experience. For Fammi vedere la Luna (Show me the Moon) young inmates were involved in co-designing the game mechanics and sharing their personal stories. They contributed to the content, including writing the dialogues for the interactive story-game."

– Anna Baldassarre, 'The Loop' and 'Fammi vedere la Luna' (Show me the Moon)

Chapter 3

Methodology

The Selection Process

Inspired by Everett M. Rogers' classic book *Diffusion of Innovations*, we use the following definition for innovation in education:

*"Innovation in education can be defined as meaningful improvements considered within the place of implementation to a new or modified practice and/or technology that supports any part of the educational ecosystem (for example, skills, teachers, assessment, environment and/or systems, and leadership)."*²⁹

To progress through each evaluative phase, all innovations must have demonstrated evidence of impact and scalability to the reviewers using the following definitions:

- **IMPACT**
Evaluated as a valuable improvement within gamification. All innovations must have at least one year of being implemented with their intended users.
- **SCALABILITY**
Either the innovation is actively expanding to other contexts or has a high degree of transferability for others to adopt its practice.

To identify thematic relevance, the following definition will be applied:

- **GAMIFICATION**

Gamification is the use of game elements in a non-game context.

PHASE 1 - DISCOVERY

The first phase involved the discovery of leading innovations by HundrED's Research Team, our partner Supercell, and HundrED's Global Community. The search was aided by surveys, interviews and in-depth online research.

Discovery activities by the HundrED Research Team included:

1. Conducting targeted outreach and personalised applicant support to potential submissions;
2. Mobilising the HundrED Community (it is essential to have our local eyes and ears on the ground, recommending and reporting about the best practices and solutions, especially in locations that are difficult to get access to, such as rural schools and regions with limited internet);
3. Engaging in other research activities such as speaking with experts in and out of education, studying academic and non-academic texts such as peer-reviewed journals and blogs; and
4. Highlighting innovations from previous years' Global Collections and relevant Spotlights.

Those innovations from the previous collections/Spotlights were added to the pool to be reviewed along with the recently discovered innovations.

During this discovery phase, 196 submissions were received.

PHASE 2 - SHORTLIST

In this phase, HundrED's Research Team and our Spotlight partner, Supercell, thoroughly reviewed each innovation for thematic relevance, and for impact and scalability. During the review process, the aforementioned definitions were used for innovation, impact, scalability, and Gamification. To be selected for the shortlist, each innovation was required to demonstrate impact and scalability using the following Standards of Evidence. For this particular Spotlight, we shortlisted 23 innovations to be reviewed by the Advisory Board in the next phase.

Impact

Measurable change/improvement within the context for at least 1-year.

Scalability

Actively expanding to other contexts or high potential of transferability.

LEVEL 5

VERY HIGH – An independent source verifies the demonstrated measurable improvement.

Example: They provide data from independent research evaluations in collaboration with Universities, Research Institutes or Organisations that conduct external impact evaluations.

LARGER SCALE IMPLEMENTATION – An independent source or sources verify the initiative has been implemented by others on a larger scale.

Example: They provide data from independent research evaluations in collaboration with Universities, Research Institutes or Organisations that conduct external impact evaluations in several contexts.

LEVEL 4

HIGH – An internal study provides evidence of the large measurable improvement.

Example: They can demonstrate research analysis of the data and evidence they have collected in the form of Innovations' impact reports, annual reports, presentations, and powerpoints.

IMPLEMENTED ELSEWHERE – The initiative can be implemented in more than one setting and/or with different groups with at least the same impact. Documentation supports implementation.

Example: The innovation has been implemented in more than one school, district, region or country and it provides documentation that supports implementation (user manuals, curriculum materials, replication models, teacher training materials).

LEVEL 3

MODERATE – A reasonable explanation describes the initiative and supports attribution of a measurable change, but they cannot prove they have caused it.

Example: Innovation page includes data that shows improvement (social media posts, video content, testimonials), but they cannot prove they have caused it.

WELL DOCUMENTED – Documentation exists about how the initiative is implemented and is comprehensive enough to enable implementation with different groups or in other settings.

Example: The innovation provides documentation on how this innovation has been implemented in one context. It includes user manuals, curriculum materials and replication models, as well as it integrates teacher training as a process for consistent replication.

LEVEL 2

LOW – A logical plan describes the initiative and its objectives, target and outcomes.

Example: Innovation page and website convincingly describes what the initiative does and why it matters.

COULD WORK – Documentation describing the implementation of the initiative in one setting exists.

Example: A reasonable explanation describes how the innovation is implemented in practice.

LEVEL 1

UNKNOWN – The design of the initiative or the quality of the data is not sufficient to measure impact.

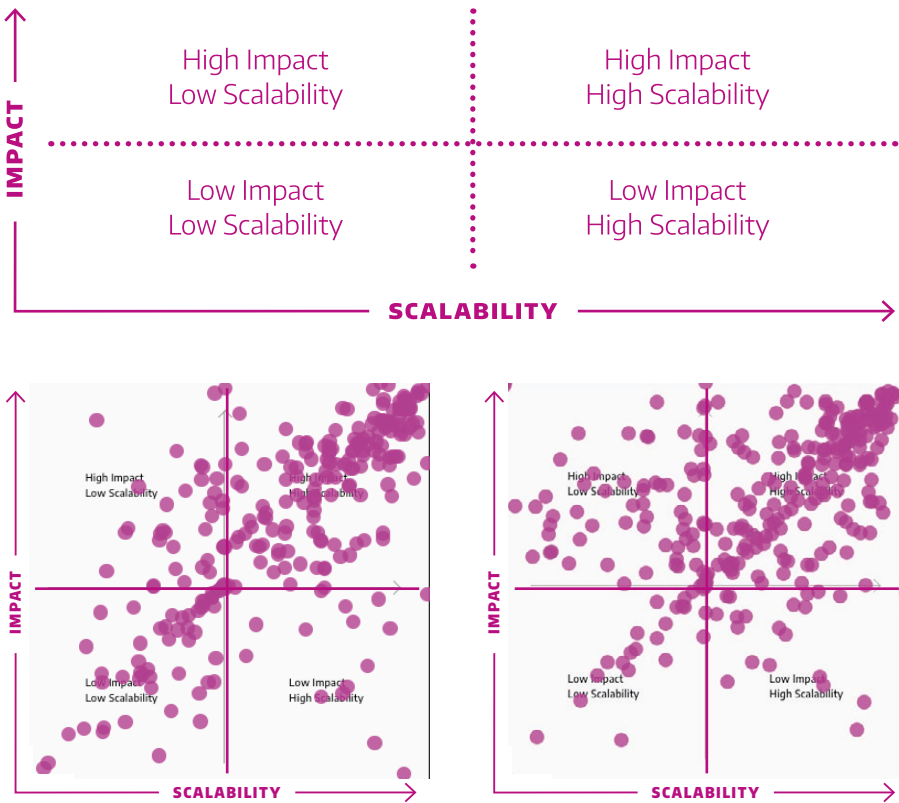
Example: Innovation page or website does not include enough information to measure impact.

UNKNOWN – Insufficient documentation exists on the initiative.

Example: Innovation page or website does not include enough information of how the initiative is implemented in practice.

PHASE 3 – SELECTION

We believe that a diversity of perspectives from a wide range of contexts is fundamentally important to our selection process. Thus, for each Spotlight, HundrED, in collaboration with the Spotlight partner, recruits and forms an Advisory Board to review the shortlisted innovations. The selection process of the Advisory Board for the Spotlight was conducted carefully by both HundrED and Supercell to ensure that they support our mission to help every child flourish in life. We also sought a range of experienced stakeholders in education who would offer valuable perspectives on innovations that gamified curricula.



Batch 1, 274 reviews from 26 reviewers

Batch 2, 305 reviews from 29 reviewers

The selected Advisory Board for this Spotlight consisted of 65 experts in education from 30 countries across five continents, including academics, innovators, teachers, and students (refer to Appendix B for further information on the members of the Advisory Board). They reviewed the shortlist of innovations over a two week period in August 2023 and extended their wealth of knowledge on a global and local scale to make recommendations towards the final selection of the most impactful and scalable innovations for the Spotlight.

The Advisory Board Review tool

Step 1: During an innovation review, the factors of impact and scalability were plotted on a graph by each Advisory Board member using HundrED’s review tool, which is divided into four quadrants. We were looking for innovations that the majority of Advisory Board members plotted in the top right quadrant: highly impactful and highly scalable. This step provides us with quantitative data to measure the average score of impact and scalability for every innovation.

Step 2: Each reviewer also provided specific comments about each innovation that explained their evaluation on our review tool. This step provides us with qualitative data to understand how impactful and scalable an innovation would be if implemented in each Advisory Board member’s context.

The 23 shortlisted innovations were divided into two batches to facilitate the Advisory Board review process. The plots on the graphs above represent reviews for all of the shortlisted innovations in this Spotlight. A total of 579 reviews were completed and ranked from the most favourable responses to the least. Plots and review comments made by the Advisory Board members were carefully considered when making the final selection in the next phase.

PHASE 4 - SELECTION WORKSHOPS

In this last phase of the selection, the HundrED Research Team and Supercell participated in a structured workshop where innovations were selected to be highlighted in this Spotlight. The discussion centred around the nature of gamification in each innovation and how it modified or enhanced a curriculum. The aim was to curate a variety of approaches to gamifying curricula. Key concerns were: (a) target groups, (b) a focus on fostering the development of the individual, and (c) bridging the gap between school and working life.

As a result of this carefully phased process, 12 innovations were selected as highly impactful and scalable innovations that gamified curricula. Those 12 innovations, representing 6 continents and 14 countries, are presented in the following chapter.

LIMITATIONS AND FURTHER RESEARCH

This Spotlight's methodology is not without its limitations. As gamification is a field that only continues to grow, there is no lack of innovations in this sector. Still, it is impossible to ask each innovation to apply, therefore the selected innovations have been categorised as of a high standard compared to other innovations that applied to this Spotlight.

We have highlighted highly impactful and scalable innovations in this Spotlight on Gamified Curricula; however, their collective profile cannot be generalised to the whole market. In putting together this report, we relied on the expertise of our partner and publicly available and reliable documents as sources of information to guide us on Gamification. HundrED highlights real world examples of good practices in education, and innovators' expertise is at the core of what we do. This is why it is important we collaborate closely with our partners and consider Advisory Board recommendations while making the final selections for our Spotlights.

Our narrow focus on Gamified Curricula also proved to be a limiting factor in itself. Although the general definition of gamification is generally agreed upon, in education, there are still variations and, of course, interpretations. Within the classroom, the lines between gamified, game-based, and play-based learning are sometimes blurry, and this resulted

in a majority of submissions that were in a much broader category. Additionally, our target audience for the call was innovators. If we had broadened that target audience to school districts or whole-school models, like Quest to Learn, we might have seen more submissions that addressed curricula more directly.

We continue to acknowledge that the language barrier presents a complex factor to mitigate. The HundrED website and reports are in the English language, which influences how those in the global education sector hear about our work, access our resources, and apply to our Spotlights. The way in which we review innovations requires that our Advisory Board must also have a good understanding of the English language. That said, we welcome any and all innovation submissions, and when selecting those of the highest quality and fit for this Spotlight, we found that the always-improving, online, open-source translation applications are useful, for both our Research Team and Advisory Board.



Photo by Enterprise Adventure

Chapter 4

Selected Innovations

Overview of Selected Innovations

During the call for this Spotlight, we received 196 applications, which were reviewed by HundrED's Research Team and our partner Supercell; the resulting shortlist of 23 innovations addressing Gamified Curricula were from 14 countries, spanning six continents. After a two week review by an independent Advisory Board of experts in gamification, HundrED and Supercell conferred again to select a final list of 12 highly impactful and scalable innovations.

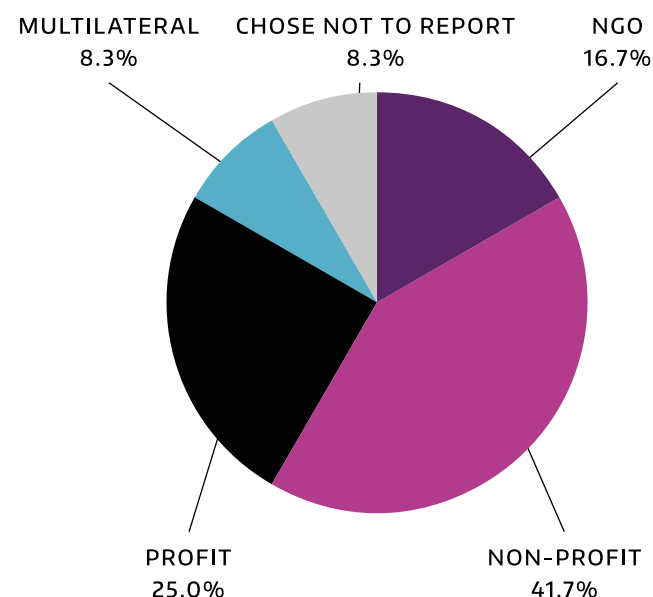
While these 12 selected innovations serve young learners in up to 149 countries, the majority of them are active in under 10 countries with the potential to grow. In fact, only three have been active for over five years. Seppo, which has been in operation since 2012, has had the highest impact at 3.5 million (an average of 388,888 students per year). The Swedish innovation imagi was awarded the highest scalability score by the Advisory Board, with 80 points out of 100. Both innovations are edtech focused; Seppo targets teachers by helping them to gamify their lessons via an app and online community, while imagi encourages students to build their design thinking skills through coding an imagiCharm.

Innovations require funding to continue impactful work and scale. This year, instead of only including two categories, profit and non-profit, HundrED also allowed innovators to select from government, multilateral, and non-government organisations (NGO). While the majority (7) were non-profit and NGO, there were three for-profit innovations. This spread of funding sources points to the need for more resources in this area of education innovation: the for-profit innovators we interviewed were very adamant about their need to generate revenue in order to create the best product possible, and the non-profit innovators highlighted the difficulties of developing their product through bootstrapping and with the generosity of volunteers, or the benefits of support from private funders or governmental bodies

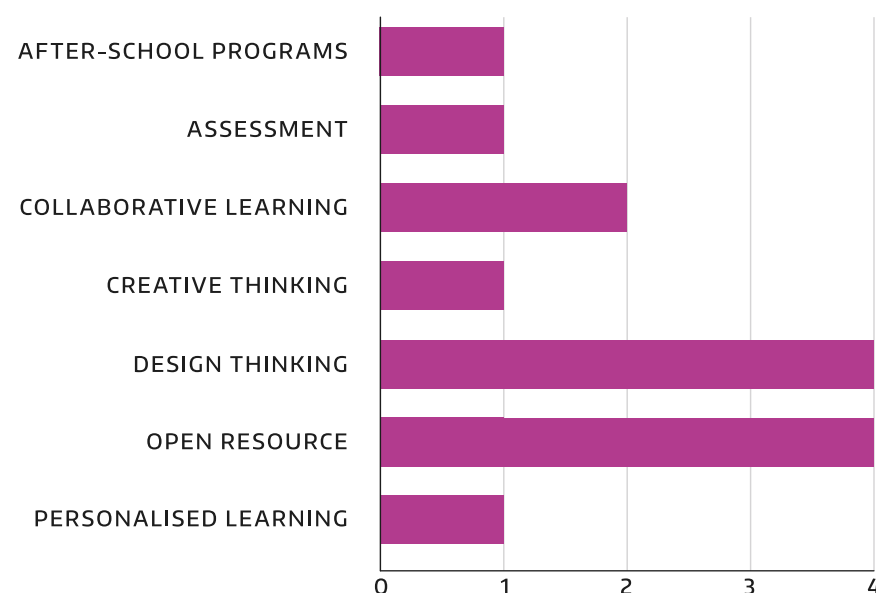
SELECTED INNOVATIONS

1. [Change Architects](#)
2. [Code Mitra](#)
3. [Digital Influx. The world's first EdTech company to teach young people User Experience \(UX\) design.](#)
4. [EMC² Learning](#)
5. [Enterprise Adventure](#)
6. [Games and Hands-on Activities for Future Ready Maker Education in 21st Century](#)
7. [imagi](#)
8. [Lumi Network](#)
9. [NASEF's Scholastic Esports](#)
10. [Seppo](#)
11. [Stages of Autonomy: growing the skills of becoming a lifelong learner](#)
12. ['The Loop' and 'Fammi vedere la luna' \(Show me the moon\)](#)

SELECTED INNOVATION BY FUNDING



SELECTED INNOVATION BY CATEGORY



VISIT THE WEBSITE



We transform children from spectators into the architects of their own future!

Change Architects

Romania

Every child has the capacity to become a Change Architect in their community when they discover, through practical experiences, their own capacity to create change and gain 21st century skills. Change Architects builds a collaborative ecosystem formed by teachers, students and supporters, using the design thinking method and a social entrepreneurial approach, to generate social change.

2017

YEAR ESTABLISHED

6 000

CHILDREN / USERS

2

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

The educational system was not able to attract, prepare and maintain high performance educators and couldn't provide the students with access to practical, life context and authentic skills. As a result students who graduate lack the skills and competencies needed to be successful. This is why complementary initiatives are needed to support the development of students, teachers and their communities.

HOW DOES THE INNOVATION WORK IN PRACTICE?

Change Architects is building an ecosystem formed by teachers, students and supporters, using the design thinking method and a social entrepreneurial approach. The project has 3 levels (Orientation, Acceleration and Deployment) which are implemented over the course of multiple school years. During Orientation, students experience for the first time the changemaking process, and work with their teachers to design and implement a pilot using project based learning and design thinking. At level 2, students are assigned a mentor with the goal to design a sustainable social innovation. At level 3, students have already developed a sustainable solution and they work closely with other students and organisations to scale their system, changing social innovation with the goal of increasing impact. At the first level the organisation goes abroad and screens teachers based on interest. Support and resources are offered to them, such as mentors and role models, who normally come from the corporate sector.

HOW HAS IT BEEN SPREADING?

The project started as a pilot in 2016 and since then has reached over 6000 students (6 to 18 years old) from Romania and Moldova, led by over 450 teachers. When Change Architects started it didn't have all the levels, but continued to bring in new resources and support to respond to the community needs, wants and limitations. The latest innovation includes the design of an online course for teachers who work together to implement the first level of Change Architects, while at the same time learn about the design thinking method and from each other. The course enables educators to learn the method, practise it in their classroom and receive ongoing feedback, resulting in 70 new projects and 1500 students reached. In 2021 the project received the Aspen Community Impact Award.

RESEARCH

Advisory Board review sample: Impact

The innovation has provided students with practical skills, and competencies, that they otherwise wouldn't have. It has helped students prepare for real-world skills that will help them in the future.

Advisory Board review sample: Scalability

Change Architects' track record shows that their approach has growth potential and scalability across a variety of contexts because of the control that teachers and students have over their paths to create positive change.

Innovator Insight

You might think that having a game or like using gamification is a waste of time. But I think it's more of an accelerator of your learning, putting the students in the mindset of the activity we're doing, having them relaxed and improving the relationships among students. If you bring an outside stakeholder, a mentor, it will also improve those relationships.

So I see more of an enhancer or an accelerator of what you're doing. So it's a tool that educators can use to motivate but also accelerate the learning of the students.



VISIT THE WEBSITE



Open-Access Contextualised Computer Science learning platform to make children future ready.

Code Mitra

India

Code Mitra, supported by Amazon Future Engineer India, is an open access interactive, locally contextualised mobile application. It introduces under-resourced learners to high-quality computer science education, building future skills like problem-solving and computational thinking. It includes programming lessons, activity labs, and simulations for solving real-life problems through tech.

2021

YEAR ESTABLISHED

140 000

CHILDREN / USERS

1

COUNTRY

WHY WAS THIS INNOVATION CREATED?

Lack of computer access, contextualised curriculum in regional languages, outdated pedagogy, and socio-economic and gender biases around tech and Computer Science education have resulted in a widening gap in access to tech-related careers and opportunities, therefore depriving the youth of 21st-century future skills essential to thrive in the digital age.

HOW DOES THE INNOVATION WORK IN PRACTICE?

Code Mitra, developed by Pi Jam and supported by Amazon Future Engineer, is a free mobile and web platform to foster equitable, contextualised and accelerated learning of problem solving and 21st century thinking skills. It is a computational tool that incorporates strategies, techniques and models that aid problem solving with technology. Further, it's a gamified and gender-responsive future skills curriculum that increases the comfort and interest, in turn impacting learner willingness to pursue careers in tech. It includes activities from various subject areas, math, english, science etc and teaches about the power of problem solving how it is deeply integrated in different domains. Currently, 1.4 Lakh users are benefiting from Code Mitra. YuWaah NXT (UNICEF) in Life Skills Delivery Report recognised Code Mitra as one of 15 scalable solutions for youth life skills education in India, showing a 10.25% increase in learners' Problem Solving skills after using Code Mitra.

HOW HAS IT BEEN SPREADING?

Code Mitra was the recipient of the mBillionth Award, and has been chosen among the top 10 mobile innovations for development across 8 South Asian countries. Unicef and Yuwaah chose Code Mitra as its solution partner for the study to identify impactful and scalable life skills training models under the Young Warrior NXT Program. In the next 3 years, Code Mitra envisions impacting 4.5-5 million learners & educators. Pi Jam has collaborated with government partners across national, state, and district levels to make future skills education accessible to the remotest corners of India.

RESEARCH

Advisory Board review sample: Impact

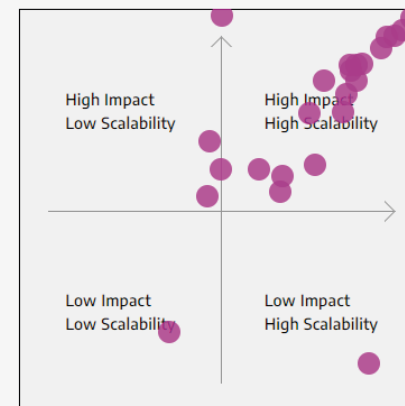
In addition to coding, Code Mitra users become socially conscientious. They also learn sharper algorithmic critical and creative thinking skills, build agency, and become part of a community.

Advisory Board review sample: Scalability

Code Mitra's emphasis on underprivileged children and its commitment to ensuring easy accessibility contribute to its significant scalability potential.

Innovator Insight

Technology or gamification and isolation is very different from when you do it in a community setting. There's just so many elements that end up playing out which are collaborative which are cultural that basically sort of make learning more holistic. So I think that's been a learning. When you have kids, together, even if they're on their individual devices. Yes, they're still able to collaborate.



VISIT THE WEBSITE



Teach them how to think, not what to think.

Digital Influx

United Kingdom

Digital Influx Academy introduces UX design to students through curriculum-aligned courses crafted by educators and UX experts. These incorporate Social Emotional Learning and align with the United Nations SDGs. UX, or user experience, is creating designs for enhanced user satisfaction. Our goal is to inspire the next generation, fostering a diverse global design community for complex problem-solving and future job market readiness.

2020

YEAR ESTABLISHED

3 100

CHILDREN / USERS

4

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

In an increasingly digital world, it's crucial for young people to comprehend the technology they use and leverage its power for problem-solving and innovation. Digital Influx aims to bridge the gap between education and industry, empowering students with skills to emerge as future creators and empathetic innovators through the UX design process.

HOW DOES THE INNOVATION WORK IN PRACTICE?

Digital Influx is a platform that offers a web-based UX design course focusing on the basics of UX and design thinking. The course is designed specifically for teachers and includes lesson plans, teacher notes, and additional resources to make it accessible to all teachers. By providing this content, Digital Influx aims to help support teachers to learn and implement UX design principles in their classrooms.

Employing innovative teaching methods, fun games, hands-on activities, and diverse learning styles, we integrate Social Emotional Learning and design thinking, aligning with the United Nations' SDGs. The noteworthy success in the USA involved approval from the Texas Education Agency for our UX curriculum, we are also registered for the Australian NSW ICT Services Scheme, emphasizing the educational importance of UX design. This recognition highlights the potential of gamification to enhance the learning experience for both teachers and students.

HOW HAS IT BEEN SPREADING?

Currently, Digital Influx Academy has 3000 users worldwide, and over the last 1-2 years has secured corporate sponsors, including PepsiCo in NYC. The goals for the next 2-3 years are to secure ongoing corporate sponsorship to fund these courses so ALL students can access these critical skills. By providing them with the necessary tools, knowledge, and opportunities, Digital Influx can empower the next generation of UX designers, filling the current UX talent gap and ensuring the continued growth and success of the UX design industry.

RESEARCH

Advisory Board review sample: Impact

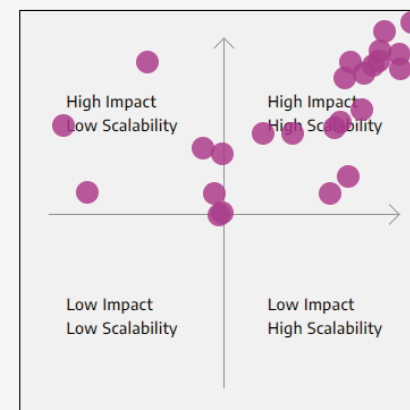
Digital Influx equips young learners with UX skills, fostering empathy, creativity, and problem-solving abilities, preparing them for diverse career opportunities and a more innovative future.

Advisory Board review sample: Scalability

Teachers are viewed as important in the implementation which is great and I can see this easily being scaled in schools with required technological resources and staff willingness.

Innovator Insight

Gamification establishes the context for our students. In the initial phase of our course, it guides them on utilising course vocabulary. Subsequently, it delves into a deeper understanding of empathy and its real-world manifestations, achieved through the understanding of UX design principles.



VISIT THE WEBSITE



Engagement at the speed of life.

EMC² Learning

United States

Gamification is hot! But beneath the bells and whistles, most gamified solutions are no more than 21st century Scantrons. We think students deserve better than mindless button mashing, and we help teachers learn a better way to play. EMC² is a platform of more than 600 fully editable resources. There are no dinky worksheets, no crass simulations, and no low level guessing games.

2021

YEAR ESTABLISHED

500 000

CHILDREN / USERS

7

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

Research consistently shows that traditional teacher PD simply does not work. But educators are constantly told to make their classrooms more engaging, and so they naturally turn to the nearest port in the storm and end up with a glut of low-level online guessing games. Authentic gamification is incredibly powerful, and EMC² Learning is a platform to help teachers learn how to use it in their classrooms.

HOW DOES THE INNOVATION WORK IN PRACTICE?

Our on-demand library provides teachers to an expanding collection of 600+ instructional activities, each of which is fully editable for any course or content area. Each resource includes a detailed write up, scaffolding suggestions, and instructional videos as necessary - and is designed to build teacher capacity as they make the shift to a more playful, student-centered manner of instruction.

HOW HAS IT BEEN SPREADING?

EMC² Learning serves a membership community of more than 6,500 paid members, and has secured annual contracts with more than one dozen districts and schools. Its member retention rate is upwards of 85% annually, and it won the FETC Pitchfest in the category of Best Online Courses. EMC² Learning now offers 600+ resources, with the goal to double the number of resources and number of paid members in the next three years.

RESEARCH

Advisory Board review sample: Impact

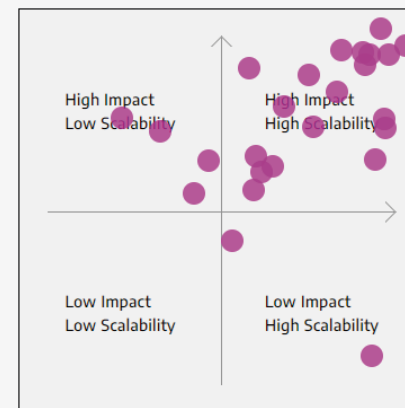
I am using such activities for my own workshops. Can testify to the simplicity yet profoundness of the Experiential learning that has been used here

Advisory Board review sample: Scalability

The group seems to be very effective at designing activities that are accessible for a lot of teachers and are clearly getting real world traction. It is helpful that it appears to be teacher-designed for teachers.

Innovator Insight

When the learner is captivated, they don't have to be held captive. Your favourite class is the one you like the most, your best class is the one you learn in the most; with gamification you can do both.



VISIT THE WEBSITE



The App for Aspiring Entrepreneurs and Change-makers.

Enterprise Adventure

South Africa

Millions of young people leave school without the skills for a fulfilling life in this uncertain world. To meet the demands of this century people must think critically, design innovative solutions and take action. Enterprise Adventure uses the challenges of planning and running a small social enterprise to nurture young leaders. Adventurers experience a genuine and compelling entrepreneurial journey.

2020

YEAR ESTABLISHED

2 900

CHILDREN / USERS

75

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

Enterprise Adventure's proven School Enterprise Challenge uses the experience of planning and running a real business in school to guide students in developing essential skills for a fulfilling life. This innovation was created during Covid and school closures, enabling young people to develop soft and business skills whilst having fun. Despite lockdowns, they could work towards creating the change they want to see.

HOW DOES THE INNOVATION WORK IN PRACTICE?

The platform can be accessed on any device with internet access. A young person registers on the App, entering a self-paced micro-learning journey planning and launching a social enterprise, joining a community of other Adventurers competing for prizes. Enterprise Adventure's proprietary curriculum combines micro-learning, gamification, and community. Adventurers advance through 22 self-paced missions, which set specific learning and basic theory through games, video, and quizzes, followed by a real-world challenge and reflection. Live online sessions, daily topical discussions, masterclasses, and community engagement enhance missions. Enterprise Adventure is available in many languages; tailored materials the power of the learning journey.

HOW HAS IT BEEN SPREADING?

Three thousand young people have joined Enterprise Adventure (more than 60% girls) through marketing among global school networks, Ambassador teachers, and Adventurers. In 2 years they have planned 400 social enterprises with strong community benefit, launched 150 enterprises, and generated an average profit of 29 USD. In 2-3 years the aim is to launch Enterprise Adventure as a Social Enterprise, allowing financially able 13-15 year olds to sponsor other disadvantaged young people. An additional aim is to establish a strong community with Ambassador Adventurers who mentor and support each other.

RESEARCH

Advisory Board review sample: Impact

By integrating gamification into the comprehension of an entrepreneurial mindset, Enterprise Adventure champions a profoundly impactful learning method. This proves especially valuable in empowering children to construct positive narratives.

Advisory Board review sample: Scalability

By giving students the information and guidance to begin making changes that they can see in real life, Enterprise Adventure crosses borders and links learners around the globe in a supportive learning experience.

Innovator Insight

Learners have expressed how this has fed into their entrepreneurial experience. We see them coming from very different places. The program is about developing the mindset, it's not just about making sure that the individuals become entrepreneurs. Learners are enjoying the mission-

based, experiential approach because it feels more real. The program is broken down into tiny chunks so learners don't have to study or do too much all at once.



VISIT THE WEBSITE



Preparing Youth as per their Career Exploration building their Curiosity, 21st Century Skills to turn them into Maker, Inventor using STEAM.

Games and Hands-on Activities for Future Ready Maker Education in 21st Century

India

This education innovation addresses quality practical education gaps through developing Games and Hands-on activities, Project based learning for Growth mindset, and a workforce that is future ready. The approach develops Exploration in young ones as Caterpillar (Tinker Tots), Curiosity in teens as Chrysalis (Makers), 21st Century Skills in youth as Butterfly (Inventors), to be Future Makers in the 21st Century for Sustainable Living.

2014

YEAR ESTABLISHED

35 000

CHILDREN / USERS

1

COUNTRY

WHY WAS THIS INNOVATION CREATED?

Fifty percent of Indian Students do not have the 21st century skills required for jobs by 2030. Critical thinking, curiosity, collaboration, communication, SDGs, sustainability, and hands-on learning are missing in education. India requires makers and DIY approaches for STEAM, as it is important for student's employability and social development. But the Indian curriculum misses this; thus, the youth are facing several challenges.

HOW DOES THE INNOVATION WORK IN PRACTICE?

Participants explore, tinker, and invent using videos, board games, and card games for experiential, hands-on learning. After various sessions, students showed a better understanding of topics. All activities are based on school curriculum that improve knowledge, engage, and encourage students to raise thinking skills. These further develop youths' skills, such as growth mindset, leadership, decision making, and being a changemaker. They become drivers of change, social innovators, and solution providers.

Games are an effective tool for students, youth, and everyone for building knowledge of complex concepts. Research shows how games and hands-on learning are effective tools for integrating, understanding of STEAM, learning of sustainability and their importance in our life. Further, participants gain understanding to explore and design their career through real-life scenarios and project-based learning.

HOW HAS IT BEEN SPREADING?

HaritaDhara Research Development and Education Foundation has been working on educational games for learning United Nations Sustainable Development Goals (SDGs), STEAM, ESD, 21st Century life skills for a couple of years. HRDEF signed a MoU with the Govt of Uttarakhand's Department of School Education for implementing programs in 32 schools from 2022-2025. HRDEF conducts online events, courses, workshops and plans to launch further online training and apps.

RESEARCH

Advisory Board review sample: Impact

Learning by doing develops students' communication, social, and teamwork skills. Students can understand abstract concepts when they learn the basics by actively engaging in discussions with their peers.

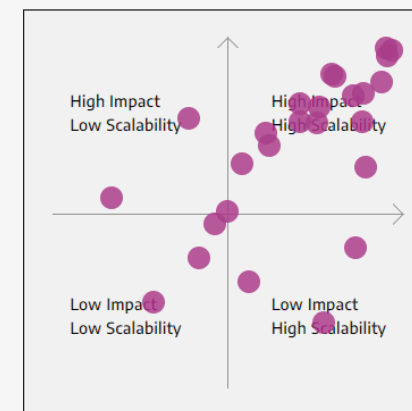
Advisory Board review sample: Scalability

The project possesses the necessary simplicity for integration into educational settings, while its adaptable concept offers flexibility for implementation across various contexts.

Innovator Insight

In the school context, what students are getting is blackboard teaching or very specific modules and they are very focused on a fixed schedule. Through our approach or through our workshops our way in general sense is gamification. Students get the chance to change this habit. They learn in a different way, an iterative way. It can

be another form of engagement so this way students enjoy the particular topic or particular session more.



VISIT THE WEBSITE



Reimagine access to coding education.

imagi

Sweden

In order for technology to benefit everyone, we need diversity among its creators. imagi develops fun and accessible coding education tools, with a focus on girls and non-binary, to empower all kids to shape the future with tech. imagi's products include a gamified mobile app, a programmable accessory (hardware) called the imagiCharm, a web platform for educators, and innovative Python curriculum.

2019

YEAR ESTABLISHED

130 000

CHILDREN / USERS

149

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

By 2030, 3/4 of jobs will require advanced computing skills, but there won't be enough graduates to fill them. Teen years are crucial for career decisions, but education systems struggle to foster interest in coding. Educators feel unprepared to teach coding in schools. Worse, interest among girls drops from equal at age 12 to just 12% at age 14, losing almost half of the potential tech workforce.

HOW DOES THE INNOVATION WORK IN PRACTICE?

imagi tools offer engaging experiences for teaching Python to 8-14+ year-olds both at school and at home. Its proprietary curriculum and tools maintain student interest by combining creative, social, and tangible experiences. The imagi Edu coding platform for educators includes ready-to-use lesson worksheets and slides, easy classroom management, and project tracking. Students ultimately create colourful pixel designs, and they can bring their unique art to life with the imagiCharm, a customisable and wearable gadget. Alternatively, kids can learn independently on the imagi app, with no parental support needed thanks to gamified learning levels. Designed iteratively with hundreds of girls and diverse educators, imagi aims to provide CS education that equips pre-teens with relevant skills and motivation to enter the tech industry. We aim to ensure that all kids have the chance to gain confidence and competence in STEM.

HOW HAS IT BEEN SPREADING?

imagi's solutions benefit educators and children globally, with virtual training and learning content accessible worldwide. Its platforms have transcended borders, with 50k+ users in 100+ countries and educational partners in 26+ countries. The imagiCharm is available as an option, further enhancing scalability. imagi Edu is being developed for integration into various school subjects, with plans for expanded software capabilities. The new Educator Ambassador program and teaching community help with reach and support for new educators. Future goals include undergoing formal impact evaluation processes, expanding the team, and ensuring platform optimisation for traffic, user-friendliness, safety, and skill-building effectiveness.

RESEARCH

Advisory Board review sample: Impact

By using a multiplatform gamified approach energised by a commitment to inclusive learning, imagi provides a simple way for educators and students to engage in a vibrant coding experience.

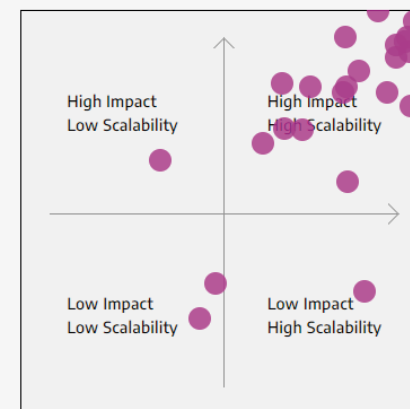
Advisory Board review sample: Scalability

I feel there is a high potential for scalability as the project combines education and fun elements in a seamless manner that engages and stimulates. I can see the same model working for many other areas and countries.

Innovator Insight

The majority of girls lose their interest for tech between the ages of 10 and 14. So we really wanted to address this and create a product that will make it fun and engaging for girls specifically in this age range to learn coding. What we found was that sort of creativity and self expression [that is appealing to girls] was really important. Also having tangible

experiences and more collaboration or competition or a social experience. So these were the kinds of things that we then incorporated into imagi.



VISIT THE WEBSITE



Building accredited Entrepreneurial & AI skills in the next-gen to thrive in an ever-changing world.

Lumi Network

United Kingdom

Lumi is building the world's first AI-augmented platform where 10-25-yr-olds undertake gamified Quests to build entrepreneurship, design thinking and AI skills while collaboratively developing tech-enabled solutions to the world's biggest problems (based on UNSDGs). The Quests culminate in a unique Digital Skills Passport for each luminary, accredited by a Stanford University affiliated institution.

2020

YEAR ESTABLISHED

1100

CHILDREN / USERS

7

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

Education isn't evolving fast enough to prepare young people for the future. Lumi is building an AI-augmented, gamified platform that allows learners to build future skills while solving global issues collaboratively. Lumi came about when a 10 year old came up with an idea to use drones during Covid to help patients and doctors!

HOW DOES THE INNOVATION WORK IN PRACTICE?

Lumi runs Quests, facilitated and fun design-thinking-led programmes designed with and accredited by experts from Stanford University. A Quest is designed to fit into any school curriculum and is delivered across 15 weeks or in a 1-week hackathon.

Up to ten young people from any background, school or country team up and pick one global problem linked to UNSDGs or a business topic chosen by a corporate sponsor. They undertake 15 live, socratic sessions facilitated by a trained university student, combined with asynchronous work on the Lumi platform to tackle the challenge in 4-phases (Identify, Ideate, Prototype, Test). Using the latest tech and AI-driven tools, they come up with tangible innovations. They then earn a Lumi Skills Passport, which showcases their proficiency in Entrepreneurship, Human-AI collaboration and Design Thinking, with a strong focus on ethics & values.

HOW HAS IT BEEN SPREADING?

Lumi is B2B focused and works with schools and companies who either sponsor the Quests in underserved schools or use them to train their apprentices or graduates. Lumi has worked with 15+ schools in the UK, India, S.Korea, Singapore, Mexico, and the UAE, who paid for Lumi themselves or offered it as an extra-curricular programme paid for by parents. The focus now is deeper collaboration with select schools to integrate Lumi into the curriculum for each child to develop a Skills Passport. The ultimate goal is to inspire a million 10 to 25-year-olds globally to become the changemakers, entrepreneurs, and innovators of tomorrow.

RESEARCH

Advisory Board review sample: Impact

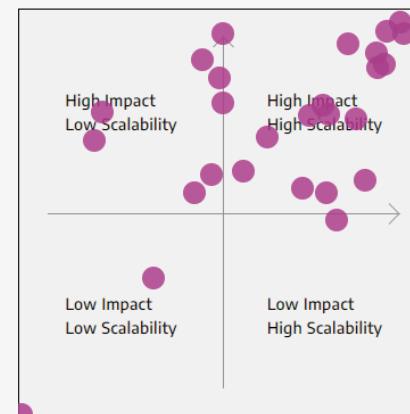
The platform nurtures in students global challenges awareness, incorporates cutting edge AI development thus providing kids with 21 century skills. It assists educators in creating game based learning activities.

Advisory Board review sample: Scalability

This innovation is extremely scalable, integrates easily with traditional schooling, and has the potential to provide young people with an equitable Skills Passport to assure a better future.

Innovator Insight

This is a very interactive experience for a young person to take a very large, hairy problem like climate change, start breaking it down to smaller problems, start researching that problem using the tools we provide, to start coming up with ideas...unlike a school, in the Lumi quest, the child is at the centre of the quest. Not the teacher. So you [the child] are treated like an adult, and that is the single biggest thing that makes Lumi attractive for young people.



VISIT THE WEBSITE



Game. Grow. Learn. Lead.

NASEF's Scholastic Esports

United States

NASEF is on a mission to provide opportunities for all students to use esports as a platform to develop STEAM-based skills and social emotional attributes such as communication, collaboration, and problem-solving abilities needed to thrive in work and in life. It's free to join! Enter tournaments, follow NASEF's club frameworks, learn about esports careers, and more.

2017

YEAR ESTABLISHED

300 000

CHILDREN / USERS

70

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

Traditional STEM based programs generally lack diversity and target white males, white females, and Asian males. When researching how to improve diversity in STEM, the founder saw millions of students playing online games. NASEF developed Scholastic Esports as a “trojan horse” to attract ALL students to a safe fun place to gather and then infused STEM curriculum and career opportunities into their play.

HOW DOES THE INNOVATION WORK IN PRACTICE?

NASEF establishes Clubs where students are empowered through templated structures to serve on committees, for example building their website social media, and learning about all facets of the esports industry and beyond. See <https://www.nasef.org/curriculum> and <https://www.nasef.org/career-pathways>.

HOW HAS IT BEEN SPREADING?

NASEF grew from clubs in 25 schools in Orange County, CA in 2017, to now over 5,000 clubs including 50 state affiliates and 32 country affiliates. NASEF's Club formation is FREE to any school and student worldwide. Our challenge as a global nonprofit is sustainable funding. NASEF currently relies on grants and philanthropy. NASEF recently launched an online Academy and professional development program for education and we see that as part of our global financial growth in the coming years. Programmatically, NASEF provides the Scholastic Esports curriculum and training of www.iesf.org, the world's largest esports association, and is currently working with the International Olympic Committee to become the IOC's education partner for esports.

RESEARCH

Advisory Board review sample: Impact

NASEF checks all the boxes - a refined vision, research-based content, and an innovative approach to truly implementing game-based learning for youth and teachers in an impactful way. This is a powerful game-based STEAM innovation.

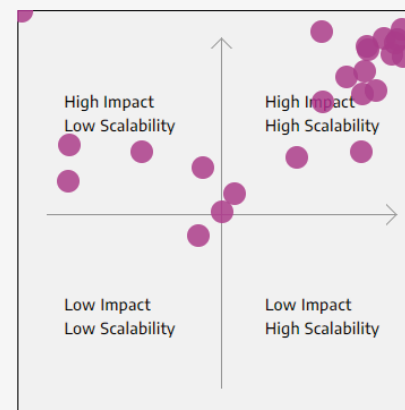
Advisory Board review sample: Scalability

Materials are free and readily available for teachers. They are also built *by* teachers, so it's easy to see how they might be used or transferred into new contexts. Builds off of coursework and activity that is already prevalent in schools.

Innovator Insight

We are flipping the classroom in giving students empowerment, to learn in a way that makes sense for them. We are helping students understand the concept of what it means to fail. Fail to us is “First Attempt In Learning,” right? In school or in work if you fail, there are really negative

repercussions. In sport, if you fail, what do you do? You pick yourself up and you try harder. That's the same kind of thing we need to impart and give kids a safe space to learn and fail because that's how you create the best of who you can be.



VISIT THE WEBSITE



Seppo platform allows you to turn your lessons into learning games.

Seppo

Finland

Seppo is an ideal tool for game-based learning. Whether you need it for a classroom or a distance learning - easily create lessons that combine creativity and collaboration.

2012

YEAR ESTABLISHED

3 500 000

CHILDREN / USERS

32

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

Creating, maintaining and enhancing learning motivation in schools is a growing challenge because the world around us offers increasingly exciting and motivating stimuli. Schools have to keep up and make education exciting and relatable to students' lives. There is a great need for ways to make learning fun in a pedagogically meaningful way.

Seppo, a gamification platform, has been procured for all Helsinki City Schools, from primary school to vocational institutes.

HOW DOES THE INNOVATION WORK IN PRACTICE?

The Seppo platform motivates students by transforming their school assignments into a game. Seppo games are a good way to learn: they develop group work skills, media literacy, critical thinking, and digital storytelling. Teachers can set the game in the classroom, schoolyard, city centre, or even a museum. Students solve tasks with mobile devices and the teacher gives them instant feedback. Teachers can communicate with students and follow them on a map using GPS. Seppo motivates students to be physically active in any subject, increasing physical wellbeing, but there is evidence it can be good for wellbeing on the whole: gamification through Seppo has benefitted getting NEET youth back on board with school.

HOW HAS IT BEEN SPREADING?

In its first five years, Seppo worked with schools, vocational training programs, and universities. During the pandemic, Seppo gained new users because teachers were searching for a tool that could help them stay in touch with their pupils and assign tailor-made content. More recently, Seppo has been working with Pearson to gamify their ESL book series, and with Yázigi language school in Brazil, to gamify their materials. Seppo can complement traditional books; gamification can bring added value to the whole learning experience. Nowadays, Seppo is also used in companies or organisations like the UK's Houses of Parliament; they use gamification in their educational work or for their training needs. Yet another proof of the power of gamified learning.

RESEARCH

Advisory Board review sample: Impact

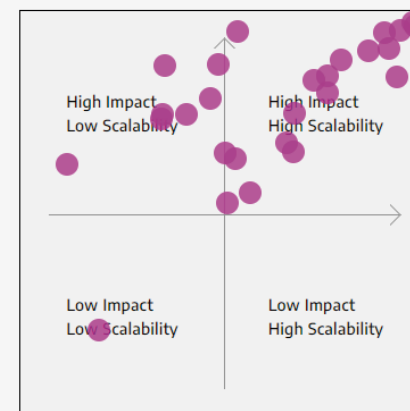
The potential for a place-based, situated approach to learning to improve student outcomes and engagement is very high. It promotes learning in a way that transcends the traditional four walls of the classroom and links learning with doing.

Advisory Board review sample: Scalability

Given that teachers have control over the platform and can design quests and are in some way co-creators, I feel there is quite a bit of scalability potential. Seems to cover corporate training as well.

Innovator Insight

We need to give the power to teachers who have the expertise to deliver the right learning experiences to their students; to empower the teachers themselves and the students of course.



VISIT THE WEBSITE



Learning the sub-skills of lifelong learning!

Stages of Autonomy: growing the skills of becoming a lifelong learner

Spain

People have increasingly talked about lifelong learning, learner agency and independent learning – but rarely provide any framework to help learners understand and acquire the skills that lead to strong autonomous lifelong learning. By delving into relevant neuroscience and research, Learnlife took up the challenge and an accessible framework to support individual learners of all ages emerged.

2021

YEAR ESTABLISHED

3 000

CHILDREN / USERS

8

COUNTRIES

WHY WAS THIS INNOVATION CREATED?

Despite a growing focus on learner agency and lifelong learning skills, there is often little skill development associated with the dialogue, just an assumption that these skills emerge. For many, the skills of autonomy are something heard, but not understood. What was needed was a clear framework outlining specific skills to guide learners.

HOW DOES THE INNOVATION WORK IN PRACTICE?

After looking at the neuroscience of strong autonomous learning, 6 domains of independent learning were identified. All the domains require a high level of self-awareness: Self-direction, Self-determination, Self-regulation, Self-management, Self-responsibility, and Learner-agency.

Within these domains, 4 levels of progress were identified and a rubric created to explain multiple components and domain-relevant sub skills. They are easily understood as 4 phases: Foundations, Guided, Independent, and Autonomous.

Learners can self-assess their skill levels against the rubric and framework and establish goals for specific improvements. For primary school learners a simplified version, 'Stages of Readiness' was developed with 3 components: Seeds, Shoots and Flowers. Specific skills are targeted.

HOW HAS IT BEEN SPREADING?

The impact on the learner community has been profound in a relatively short time frame. A stronger and tangible culture of learning has emerged, one that is calmer, consistent, visible, understood and aspirational. Its strengths have been the clarity of skills necessary, as well as the non-judgmental approach of self-positioning of learners on an autonomy continuum. The main goal is to embed a culture which is subliminally stronger than other cultures, so that learners adopt an evident and strong culture of learning without thinking. The individual goals form part of the regular learner-mentor conversations and the cyclic 360 degree learner growth meetings. Learners gain an authentic vocabulary as they grow their capacities as lifelong learners.

RESEARCH

Advisory Board review sample: Impact

This form of skill based autonomous or synchronous peer to peer learning is a wonderful and innovative approach towards learning any life skill. I see a great impact coming out of it for any student who passes through such a curriculum.

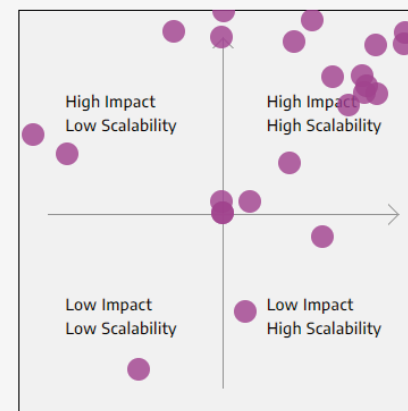
Advisory Board review sample: Scalability

The content is broad enough to fit into specific content areas as well as stand-alone skills and activities. This should have appealed to educators across the K-12 spectrum.

Innovator Insight

Learners have to actually show impact, and it's multifaceted. The learners say, 'In three months' time, I want to have a rite of passage to then be able to progress to a different level of autonomy.' Then they start preparing the information, whether that's a video they're making, whether it's a game that they're creating, whatever the learning. However, the

learning is going to be demonstrated by how they start putting it together to then have that demonstration, and then they progress along.



VISIT THE WEBSITE



Transformative play to redefine self-perception and society's perception in and out juvenile prisons.

The Loop and Fammi vedere la luna (Show me the moon)

Italy

The juvenile prison system in Italy needs to work on the inmate's background culture and post-prison stigmatization by redefining detention centers as places of care. Within this vision, during a program in Airola Juvenile Prison, we explored the transformative role of play by co-designing with inmates "Fammi vedere la luna" (interactive story-game) and "The Loop" an Escape Room set in the jail.

2022

YEAR ESTABLISHED

250

CHILDREN / USERS

1

COUNTRY

WHY WAS THIS INNOVATION CREATED?

Imprisonment does not facilitate reintegration, but rather promotes segregation and contact with delinquency, increasing the conflict between young inmates and the outside world. The project aims to transform detention centers into places of care through language and landscape changes by working on stigmatization, cultural context, and on the relationship between inside and outside the prison.

HOW DOES THE INNOVATION WORK IN PRACTICE?

'The Loop' and 'Fammi vedere la luna' have been designed with inmates and include similar topics although target different users: 'The Loop' is a physical Escape Room meant to be played in juvenile jails. The goal is to explore themes and to reflect on inmates' own identities and conditions through an engaging narrative. Through role-playing, the prisoners become protagonists of the story and are led to explore their personal real-life situation through challenges using metaphors.

'Fammi vedere la luna' is an educational tool for students and young people to reflect on freedom, stigmas and cultural contexts around prisons. This game triggers empathy towards people who are in a situation of detention and social marginality by emerging their relational, material and psychological difficulties. This interactive game allows users to influence the story, the events and the emotional states of a boy who is in a juvenile prison through different choices.

HOW HAS IT BEEN SPREADING?

The Loop has been organised and played in the juvenile prison during the Summer School in 2022 and in 2023. The game 'Fammi vedere la luna' is accessible and playable by everyone through the website, fammivederelaluna.mediterraneocomune.it. We have developed a workshop format around the game that we have brought to school in marginal contexts where, beyond the gaming experience, we propose multiple informal activities about the main themes. Both 'Fammi vedere la luna' and 'The Loop' are in a testing phase and projects have garnered significant attention, being featured at various research events and discussions on a national scale. This exposure has helped these projects reach a larger audience and contribute to meaningful conversations about their impact and significance.

HUNDRED.ORG

RESEARCH

Advisory Board review sample: Impact

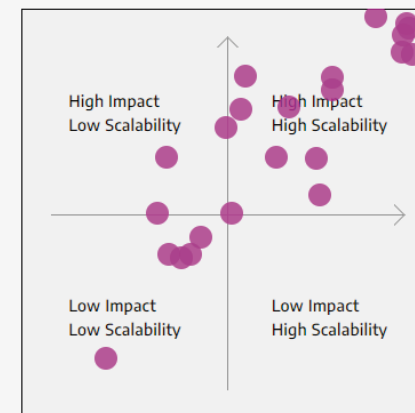
This innovation is truly impactful as it works with a group of young people that are often forgotten, and gives them an opportunity to dream of a future outside of crime and prison. It works on developing important SEL skills .

Advisory Board review sample: Scalability

While naturally aiming towards a dimension of imprisonment, the project is highly scalable both in national and international territory - and responds to collective needs to find alternative solutions for the rehabilitation of inmates.

Innovator Insight

Unlike traditional approaches, this familiar language of the game can help people talk about their experiences, self-empower themselves. Sometimes we forget that we can have fun and we can play. We think we can only play when we are young and we need to refresh this feeling and it's a good way to use it also in the educational field.



Chapter 5

Conclusion

Gamification, while not new, is currently at the forefront of education innovation. Its close linkage with edtech and artificial intelligence, as well as its promise of motivating and engaging learners make gamification a popular method in classrooms globally. Through this Spotlight, it was our aim to not only select education innovations that were using gamification in certain aspects of the classroom experience, rather, we were looking for those that gamified the entire curriculum.

As we interviewed innovators and read review comments from our Advisory Board for this Spotlight, we wanted to gain a comprehensive understanding of how gamification can help schools and teachers to provide learners with a more engaging, student-centred experience. During virtual interviews with each innovator, the HundrED Research Team probed them for their insights into the future of gamification in education, their experiences as innovators in this field, and their perceptions of the continued scaling of their innovation. In our conversations, we also were able to pinpoint some key takeaways for gamifying curricula.

Gamification takes intentional effort. Teachers need the support of a like-minded community to increase their success in implementing a gamified curriculum.

Gamification also requires buy-in from decision-makers, especially from policy and resource allocation perspectives. Curricula must fit within the set educational standards, and this can take time to get approval. Even if the resources are provided for free (as several of these innovations are), the professional development piece has a cost.

Gamification is not just about tech. Gamification can be used to help learners to 'level up' and see their progress through milestones and the creation of a final product. This can take time, but the process yields invaluable results.

ADVISORY BOARD CONSIDERATIONS AND RECOMMENDATIONS

Price is a concern for many of the selected innovations. Those that are fee-based are inaccessible to many parts of the world given the relatively high cost. Innovators say that this is the point; they want to create a high quality product, and this requires investment on the part of users as well.

Tech-based innovations are also a barrier for many parts of the world, although they also can be modified for the context (innovations have creative work-arounds for lack of infrastructure or access to devices).

Language and cultural contexts for some of the innovations were seen as a barrier to scaling; the innovations designed for a particular context were encouraged to find ways to adapt (translation or other considerations).

Whether gamified or not, when considering any kind of curriculum, we must acknowledge the barriers to innovation and adoption. Gamification of curricula can be successful when there is a connection between curriculum designers and the educator implementing that curriculum. As van den Akker suggests, a regular research-based dialogue can address the complexities involved in designing curricula and the practicalities of needs and use in the classroom. This leaves us with a question for further consideration: at what level (policy, district, school, classroom) does the most effective gamification of curriculum development occur? Does it happen outside the system, with innovators? Where should gamified modifications take place?

Gamification has the wonderful ability to put learners at the centre of their own experience. Their ideas and goals are valued and they can engage in discovery independently and with others, whether in or out of the classroom. Gerald Solomon from NASEF's Scholastic Esports emphasised an opinion echoed by other selected innovators: gamification flips the fail mentality and turns it into a First Attempt In Learning. Learning becomes more than just getting an answer right or wrong; it is the opportunity to explore, try, experiment with one path, and then try another in order to get to the end goal, whether it's coding an imagiCharm or progressing to the next level in their Stages of Autonomy. From setting the stage for developing real-world solutions to very imminent problems, or realising they have the ability to start their own business, young people can find their place and grow a mindset of lifelong learning through gamified curricula.



Do You Want to Organise a HundrED Spotlight?

HundrED Spotlights are an opportunity to gain a thorough insight into the education innovations taking place in either a specific area of education, like literacy or sustainability, or within a certain geographic location, for example, India or London.

HundrED Spotlights are organised by HundrED and a Spotlight Partner. Together we select the location or theme of focus and will encourage applications from innovators for this Spotlight. In-depth research will be conducted together into these innovations and 10-20 will be selected by HundrED, partners, and an advisory board. Spotlighted innovations will be packaged and shared on the HundrED platform.

HundrED Spotlights are non-profit but rely on funding from Spotlight Partners. If you are interested in becoming a HundrED Spotlight Partner please contact us.

We believe that these selected innovations deserve to be spread across the world. And there is a lot more good innovations just like them waiting to be discovered.



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Endnotes

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Appendix A: Shortlisted Innovations

Innovation Name	Country
Biophilic Education Alliance (BE ALL)	United Kingdom
Brixilated Builders Academy	United States
Change Architects	Romania
Code Mitra	India
DiBL	Denmark
Digital Influx. The world's first EdTech company to teach young people User Experience (UX) design.	United Kingdom
EMC² Learning	United States
Enterprise Adventure	South Africa
Games and Hands-on Activities for Future Ready Maker Education in 21st Century	India
gameSTEM	Turkey
imagi	Sweden
League for Green Leaders	Canada
LearnCard	United States
Lorugames.com	Finland
Lumi Network	United Kingdom
PathWork	Bangladesh
NASEF's Scholastic Esports	United States
Seppo	Finland

<u>Stages of Autonomy: growing the skills of becoming a lifelong learner</u>	Spain
<u>Teacher-Gamer Revolution - using Role-Playing Games (RPGs) and World-Building in Education</u>	Indonesia
<u>The Loop and Fammi vedere la luna (Show me the moon)</u>	Italy
<u>VinciU</u>	Argentina
Undisclosed Innovation	

Appendix B: Advisory Board Members

Full Name	Country	Role, Organisation
Abdechafi Boubkir	USA	Director of Programs, Geneva Global
Abigael Anaza-Mark	Nigeria	Programmes Associate, Co-creation Hub
Ahmed Shahriar	Bangladesh	Co-founder, Banglar Math
Alan Gershenfeld	USA	President and Co-founder, E-line Media
Alok Sharma	India	Learning & Development Consultant
Anagha Krishna Prasad	Denmark	Student, International School of Hellerup
Andrea Buffara	Brazil	Co-Founder and COO , Gamut Education
Anthony M. Yadao	Philippines	SHS Teacher, Pinili National High School
Anupam Sharma	India	Senior Incharge, Indirapuram Public School
Assel Mussagaliyeva-Tang	Singapore	Founder and Chief Learning Officer, EDUTech Future
Barbara K. Ige, Ph.D.	USA	Learning Manager - College & Career Pathways, Woodcraft Rangers
Benjamin Gross	USA	High School Social Studies Teacher, Oak Mountain Academy
Canan Kaçar	Turkey	Architect Educator, TURMEPA
Carl Kervin M. Sapungan, Ed.D.	Philippines	School Head, Panluan Hagan Mangyan High School
César Marques	Portugal	Physics and Chemistry Teacher, Ministério da Educação da República Portuguesa
Charly Harbord	UK	Director of Partnership, The Global Game Jam
Christopher Klune	Canada	Program and Research Assistant - EdTech Fellowship Programme, Open Development and Education
Curtis LeBlanc	UK	Director of Games, East London Arts and Music

Damien Bruneau	UK	Founder, TutoTOONS
Daniel Kwaku Ganyoame	Ghana	Executive Director, Africa ICT Right
Dinesh Kumar K	India	Mission Leader, BigBodhi Academy
Dorcas Bazemore	USA	Educational Resources Specialist/ Learning and development specialist, MyED Champ.org
Theodore J (TJ) Kopcha, Ph.D.	USA	Professor of Learning, Design, and Technology, University of Georgia
Drussila Hollanda-Grönberg	Finland	Chair, Hive Helsinki
Ebengo Honoré Alfani	Kenya	Program Director, Advocacy Initiative for Youth Development
Emilia Puschmann	Finland	CEO, Hive Helsinki Foundation
Folasayo Olalere	South Africa	Senior Lecturer, Durban University of Technology
Gal Oron	Netherlands	CTO, Zbenko Studios
Ghasem Barjasteh	Iran	Facilitator of Dialogue, Center for Dialogue
Giovanni Scala	Italy	
Jaime Camacho B.	Mexico	Investigator, Centro Educativo Apatzeo
Jazib Zahir	Pakistan	COO, Tintash (Pvt) Ltd
Jennifer Lim	Singapore	IB MYP Design Educator, Esports teacher, XCL World Academy
Jón Sveinsson	Iceland	IT Educator and Program Coordinator, Humlab at Umeå University
Karla Reyes	USA	Founder and Studio Director, Anima Interactive
Leo Tiah	Liberia	Executive Director, Youth Network for Positive Change
Lucy Hayter	UK	Director of Generation Global, Tony Blair Institute for Global Change
Mahmut Akcan	Turkey	Founder, The fYOUture Project
Milena Savova	Bulgaria	Manager educational processes, Educational Technologies

Mir Nadim Faisal Ahmed	Bangladesh	Founder & CEO, Schooled At Home Foundation
Namya Joshi	India	Youth Ambassador, HundrED
Ngozi Edeagu	Germany	Junior Fellow, BIGSAS, University of Bayreuth
Ozgen Bagci	Netherlands	Academic Program Director, Goal Testing
Pat Rigueira	Brazil	Deputy Head of Sustainable Development , Museo de Arte Moderno de Buenos Aires
Prashant Muley	India	Principal , Jindal Adarsh Vidyalaya
Preeti Manchanda	India	Independent researcher,
Puneet Singh Singhal	India	Marketing Head, Billion Strong
Randall Fujimoto	USA	Game-Based Learning Designer, GameTrain Learning
Sandra C. Ospina	Saudi Arabia	Head of Learning and Innovation and Vice Principal, SEK international School Riyadh
Selvin Rivas	El Salvador	CEO and Founder, Edunet Latinoamérica
Susana Gonzalez	Venezuela	Co-founder and Head of Communications, ED-Challenge
Tanya Wilson Chua	Singapore	Education Lead, EYEHYAH!
Timothy Hew	Hong Kong	Professor, Faculty of Education, The University of Hong Kong



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