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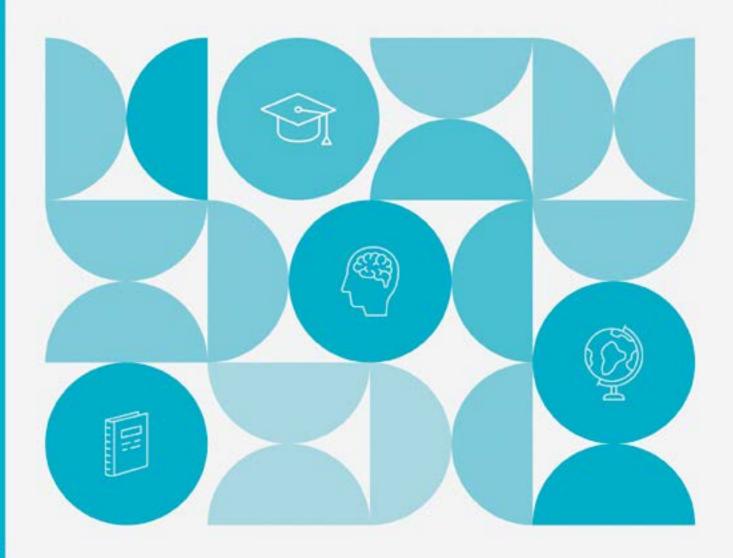Unlocking human potential إطلاق قدرات الإنسان

EMBEDDING INNOVATION LABS IN SCHOOLS AS A VEHICLE FOR TRANSFORMATION IN EDUCATION

EXECUTIVE SUMMARY

Today, schools and education systems globally face critical and complex questions about how to organize themselves to most effectively support learning and overall learner development for an increasingly challenging world. While some guidance is provided by research, data trends and frameworks provided by organizations such as the OECD, perhaps the most challenging task is helping learning environments understand how to shift to more future-oriented models. This leads to the guiding questions for the work described in this report: *How can learning environments be supported to tackle these challenges and navigate to their preferred futures?*

While deep, meaningful and lasting change has been elusive in systems of education, more recently we have seen an increased shift from reform efforts to *redesign*—moving away from trying to 'fix' parts of education that are not working well, to a design mindset of creating and driving towards the learning futures we desire. Such an approach takes inputs on modern and emerging learning technologies, research on learning, and global trends as the foundation for designing new directions for the school or learning environment to move into in a coherent way.

In February 2020, WISE launched the WISE Innovation Hub as a platform and research initiative to support schools in embedding their own innovation and design practices as a mechanism to address critical learning issues they are facing, including those related to design and implementation (curriculum and teaching), and impact (assessment and learner outcomes). Although this initiative was established before the COVID-19 pandemic, it became a timely mechanism for understanding rapid transformation and innovation in practices at a time requiring this of most schools globally.

During this pilot phase (February 2020 - June 2021) WISE supported three schools of varying demographics with varying challenges and goals, to establish what we referred to as an "Innovation Lab" — an embedded structure and process to drive forward innovation within a school. Each school created their own Innovation Lab, which included a designated team of teachers and leaders within the school to identify core goals and future directions

for the school (such as personalized learning, competency-based learning, etc.). In partnership with the WISE Innovation Hub team, each school's Innovation Lab team worked together to create practices and processes to design, test and implement their innovative solutions.

An Innovation Lab (as framed by this initiative) is a research, development and innovation unit embedded inside a learning environment in order to design and implement the future-focused structures of that learning environment, and propel it effectively forward. An Innovation Lab in a school is characterized by a number of key factors:

- serves as an "engine" of innovation, research and design practices inside a school, to drive forward new practices and model design, helping the learning environment transform itself into a contextually relevant and innovation model of twenty-first century learning;

- embraces key strategies, including conducting rapid research and evidence-collecting as needed; leveraging innovation cycles; designing, developing and testing prototypes and innovations; developing distributed leadership; enabling champions of innovations; and embedding teacher learning in design;

- operates as a team of people owning and overseeing the research on what is working in the learning environment, identifying what is needed, and exploring how new approaches might be designed, adjusted and implemented to meet the needs of its contexts and its learners;

- looks at the critical aspects of how learning is being supported in the school, what needs new innovative designs to support current and future objectives, and what tools and solutions will work effectively for its context to meet those needs;

- is capable of utilizing a mix of core practices in research, design, and innovation;

- integrates centrally into the core practices (pedagogy) of the school;

- builds capacity in individuals — skills, capabilities and mindsets — in school teachers, leaders and broader community stakeholders;

- serves as the key driver of deep changes to the learning environment, through strong and well-defined tools and methods;

- connects to a broader, global education research and innovation community.

Together, this empowers a learning environment to:

→ set a vision for their preferred future;

→ research, design, and support their community to innovate towards that vision in a way that is evidence-based; and

→ be able to dynamically adjust course as needed with the ongoing global shifts that we will continue to see over the coming decades.

The WISE Innovation Hub provided support and capacity-building for schools to implement their own Innovation Lab, while implementing a design-based research (DBR) approach to both support each school's efforts and to understand (1) what conditions and supports provided for the most successful outcomes of the model in each school, and (2) what outcomes were possible when these conditions were met and optimized.

Outcomes

The general intention and purpose of embedding an Innovation Lab in the three participating schools was the same, but each school had its own unique and distinct journey. Furthermore, since each school's shape, size, goals, context, demands and variables were different and specific to that school, each Innovation Lab's structure and activities were equally unique and continued to evolve dynamically over the course of the project. For example, School 1 came to the project looking for ways to deepen and extend their already progressive educational model. They

sought to support their framework with further learning sciences research and evidence, and develop a set of associated tools to deepen their measurement and documentation of learner growth. By contrast, Schools 2 and 3 can be categorized as very classically 'traditional' by common standards, with rigorous and highly focused academic curricula and structures. Their aim for joining the project was to seek ways to integrate twenty-first century skills and competencies into their learning frameworks. School 2's aims were a bit bigger than School 3's in that they were interested in completely transforming their model with a robust competency-based framework developed by their Innovation Lab. By contrast, School 3 was looking to begin the journey to start to build into the existing school structure more integrated, project-based learning where possible—without disrupting the existing model very much.

Each school's size, structure and resources devoted to this work varied as well. Whereas School 1 had already fully committed to the vision of having an embedded Innovation Lab for years to come and, as such, already had full-time staff devoted to it, Schools 2 and 3 at the start of this initiative largely did not allocate any additional human capital or financial resources to the work and initially perceived this as means to an end.

Core findings include:

I. Adaptable Design: For success, the Innovation Lab structure needed to adapt according to the unique needs, goals and variables of each school.

At the start of this initiative, with each school we explained the purpose of this work and what was intended by the term "Innovation Lab". Part of the challenge was explaining this somewhat intangible concept which had not been implemented or defined extensively yet in the field. As such, and understandably, each school construed and interpreted what they felt an Innovation Lab could mean or do for their context, and how it would look in practice in their school. This was of course a central part of the hypothesis of this work: that the reason

change, transformation and reform largely has not had much success in education is because too often top-down, standardized structures are pushed on schools with little to no way of of accounting and accommodating for localized needs and dynamics, as well as lack of infrastructure to support the teachers and leaders implementing the changes.

II. Adaptive Change: The journey IS the work.

Each school's pathway showed that the journey was perhaps more important than the destination itself. While each school had clear vision and goals for growth and change, the journey itself was critical in collectively enrolling the whole school community in reaching that destination. In each school's journey, the very nature of the vision and the goals evolved through the work itself. Data collection, research, or piloting a prototype, elucidated new insights and understandings that helped direct the work in the right direction. Such insights would not have been as readily available by just planning a new school change or program outright and implementing it fully at the start of the next school year. Similarly, as the schools achieved certain outcomes, new desired outcomes became clear. For example, as School 2 worked to move to a mastery-based model, they felt that PBL (project-based learning) was not a priority and something the school was already adept at. Yet as they began piloting competency-based rubrics and new instructional methods for supporting them, it became clear that in fact many of the teachers at the school needed much more support in this area.

III. The Power of a Third Party: Having an external sense-making resource helped to shape innovation in the school and catalyse a range of benefits.

A consistent refrain heard when discussing this initiative at the conclusion of this year was the value and impact of having a 'neutral' third party provide clarity, expertise and focus which helped the school move forward towards their goals in a much quicker fashion.

IV. The Heart of Change: To be effective, the Innovation Hub's work must be embedded at the core of practice and spearheaded by school leadership.

Innovation work can easily get tossed aside if it is not built-in, protected and prioritized amongst other initiatives in the school. By definition, innovation is going 'against the grain' of what is, pushing against much of the status quo inertia; in a busy school year it can easily be cut off as "something extra we don't have time for." Collaborative development of the work through an external support or intermediatiary, such as the WISE Innovation Hub, providing expertise, coaching and co-design, was a key catalyst in pushing beyond this inertia. But it's not always enough. Unless the work is also embedded in the foundation of the school's practice and led visibly by the school leadership through an internal mechanism like an Innovation Lab, the work will likely not be sustained. We observed this to varying degrees and in varying ways across all three schools. While all good innovation work can and should have champions or change leaders at the helm, it cannot ride on one person's shoulders alone. Similarly, if it is not embraced as a fundamental practice to the school's 'work' now, then it is easily considered superfluous, peripheral, and not necessary when things get challenging. This is one of the reasons this work was framed at the beginning of the initiative as an "embedded engine" inside the school. The initiative was tied to fundamentally designing the future of core school structures for two reasons: first, so that it was embedded at the heart of the school's practices and not seen as extra or easily discarded; and second, because we are pursuing innovation in the core structure of the school for deep transformation.

Implications for Research, Policy and Practice:

Research is a crucial aspect of developing ideas applicable to the Innovation Labs. Investing in educational research and evaluation is fundamental to the education ecosystem's success. The rapid development of Innovation Labs will encourage educators to update and change their teaching methods through research. Implementing Innovation Labs will require new tools and resources, and further investment of resources. Likewise, more research is needed to understand the impact of directly cultivating these skills in educators and school professionals as they become more active and participatory co-designers of learning environments going forward, and the impact/value of creating time and space to cultivate these skills directly. Finally, the Innovation Hub model brings together contributions formulated from differentiated theoretical or methodological approaches that enable educators and learners to advance in understanding the complexity of the education system. The integrated, design-based methods used to drive forward innovation and transformation at the school level is also helping us to collectively expand our understanding of innovation, change, and redesign for modern education—and how the successful design and implementation of those innovations across varying contexts might look. This is an essential knowledge base for the field of education, in both our understanding of effective change and in the design of modern learning environments for a wide variety of contexts and learners.

As dynamic, embedded R&D labs inside schools, Innovation Labs create the context to elucidate key insights on effects of current policies in inhibiting innovation and change. These labs also create a structured space to trial new policies through risk-mitigated structures that scaffold change processes in schools. Key insights on the nature of change and innovative learning designs can be brought forth from these contexts in order to inform (and test) future policy

development. Such insights are also needed as we seek to understand how to develop policies that effectively adapt to the global and societal shifts today. Such policies should prioritize and protect the ability for educators to cultivate these new competencies, and would facilitate the introduction of alternative methods and environments to do this. Finally, to implement Innovation Labs effectively, we need to identify and remove barriers to such innovating, and invest in supporting schools to build this capacity. A resilient system is open to demonstrating performance in various ways, including articulation of what is working and what is not with the system structures, and allows the flexibility and 'space' for this type of innovation work. Such a system is open to the users iterating and adjusting plans even halfway through a school improvement cycle. Policies (and their design) play a critical role in either enabling that kind of dynamic innovation and transformation, or in stifling it. As such, policy-makers participating in the capacity-building that is a part of the Innovation Hub model is also advised.

In regards to practice, additional resources must be allocated to schools to support the implementation of Innovation Labs. Resources like additional human capital and financial resources are necessary to rebuild learning environments. Schools that have undertaken transformational journeys and invested in a new operating system model require a school community to design the destination and the pathway. Central to this approach is collective capacity building. Schools need to create a culture that is open to more risk-taking, where teachers and learners can try new ideas and test new models. Teachers and other key stakeholders in the school need a safe space to share perspectives about effective practice, and they need to feel safe, broadly speaking, to take on such work. At the same time, school leaders must be supported in building their own capacity to lead transformative innovation—this includes supporting teachers to build their own capacity for flexible and reflective teaching practices, as well as design and innovation. The role of the school needs to be shifted from that of simply an 'enacting organization' to a 'learning organization' that seeks to achieve maximum growth capacity.

The school-embedded Innovation Lab model affords a mechanism for the 'change infrastructure' for innovation, coherent co-design, and a possible pathway to achieving the school's goals and vision. Innovation Hubs offer a model of education systems that can support school networks in catalyzing innovation and collective, evidence-based transformation for modern learning ecosystems. The authors hope this work will inspire educators, school leaders, parents, administrators and policymakers to explore innovation in their systems, identify existing barriers, and consider how they can play key roles in supporting, regularizing and embodying the design of modern learning so critically needed for our complex world.