NPDL Global Report

New Pedagogies for Deep Learning™
A GLOBAL PARTNERSHIP

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NPDL Global Report

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EXECUTIVE SUMMARY

This global report details early findings, key areas of learning, and insights to inform the future direction of the New Pedagogies for Deep Learning (NPDL) global partnership, which comprises a network of hundreds of schools in six countries working to design, implement, and measure deep learning. NPDL's processes and *Suite of Tools* address the growing need to develop and measure the competencies that enable learners to create new knowledge, make connections, and generate positive changes in their own lives, the lives of others, and the world. Teachers and school leaders have submitted data on NPDL's *New Measures* of deep learning conditions, outcomes, and design. Data demonstrate the current baseline level of deep learning globally, as well as early successes in improving learner outcomes through new pedagogies driven by teachers and accelerated by digital technologies. All evidence collected from NPDL participants is used formatively to inform the global and local direction of work developing deep learning. The evidence addresses questions about deep learning and the new pedagogies, as well as the capacity building required to bring them to life. Early findings in these key areas include the following:

1. As a global baseline, students' level of development of the deep learning competencies ("6Cs") is widely *Emerging*; the way in which learning has been traditionally designed and implemented has not effectively developed deep learning outcomes. The measurement of students' deep learning progression has demonstrated the impact of NPDL tools and processes in developing the 6Cs. Participants are committed to the deep learning journey as a means to improve learning outcomes and foster success for all learners.

2. New pedagogies learning design facilitates student development of the 6Cs *and* strengthens teacher capacity to align and embed curriculum focuses, design and measure deep learning, and assess performance using a broad range of evidence. Its impact illuminates the importance of learning experience design, moderation, and sharing in further improving outcomes globally.

3. The adaptability of NPDL's tools and processes allows for successful deep learning implementation on a local *and* global scale. Strengthening NPDL's global network by providing additional means of participant connection will enhance their collective capacity to cultivate the conditions consistent with deep learning.

THE NPDL GLOBAL PARTNERSHIP

New Pedagogies for Deep Learning (NPDL) is a global partnership dedicated to identifying new pedagogies that foster the development of deep learning competencies, and establishing new measures of student progress and success. The initiative began in 2013, and is led by Michael Fullan, Joanne Quinn, and Joanne McEachen. NPDL's system, tools, and processes are currently in use in six countries (Australia, Canada, Finland, Netherlands, New Zealand, Uruguay) and some 600 schools, and will be implemented in at least four other countries (Denmark, Norway, Sweden, United States – four states) within the coming year.

NPDL developed as a response to the widening gap between traditional learning outcomes and the knowledge, skills, and competencies that are truly important for success in the world today.[1] Changing social and professional landscapes demand similarly rapid, technology-enabled advancements in teaching and learning, so that *all* students are prepared to meet challenges and solve problems to make a positive difference in their lives and communities.

New pedagogies that engage students around meaningful, relevant, and real-life learning experiences address the need for *deep learning* – learning that engages students in the mastery of academic content, creation of new knowledge, and development of deep learning competencies, all of which combine in the formation of actions and responses that drive their learning, their lives, and the world forward.

NPDL has identified six deep learning competencies (the "6Cs") as those which are required of all learners for success both as students and citizens of the world:

Character

Learning to deep learn, armed with the essential character traits of grit, tenacity, perseverance, and resilience; and the ability to make learning an integral part of living.

1. Alliance for Excellent Education. (2011, May). A time for deeper learning: Preparing students for a changing world. Retrieved from http://all4ed.org/wp-content/uploads/2013/06/DeeperLearning.pdf

Citizenship

Thinking like global citizens, considering global issues based on a deep understanding of diverse values and worldviews, and with a genuine interest and ability to solve ambiguous and complex real-world problems that impact human and environmental sustainability.

Collaboration

Working interdependently and synergistically in teams with strong interpersonal and team-related skills including effective management of team dynamics and challenges, making substantive decisions together, and learning from and contributing to the learning of others.

Communication

Communicating effectively with a variety of styles, modes, and tools (including digital tools) tailored for a range of audiences.

Creativity

Having an "entrepreneurial eye" for economic and social opportunities, asking the right inquiry questions to generate novel ideas, and leadership to pursue those ideas and turn them into action.

Critical Thinking

Critically evaluating information and arguments, seeing patterns and connections, constructing meaningful knowledge, and applying it in the real world.

One of the main barriers to assessing learners on what really matters for their lives is the difficulty of measuring the learning conditions, designs, and outcomes essential to finding success with deep learning. These difficulties of measurement have restricted the extent to which these factors are focused on, in turn limiting the learning opportunities actually shaping students' opportunities for success.

In order to address this measurement challenge and shift assessment practice toward the incorporation of a broad range of performance indicators, NPDL developed *New Measures*. The New Measures are a set of tools that help teachers and education leaders analyze and improve deep learning conditions, design deep learning experiences, and facilitate deep learning competency

development. At the same time, they allow measurement of growth and progression in real-time and at various points in the administrative, teaching, and learning cycles. In addition to measuring these underlying elements of deep learning, the New Measures provide a shared language and understanding that foster and sustain deep learning in the process.
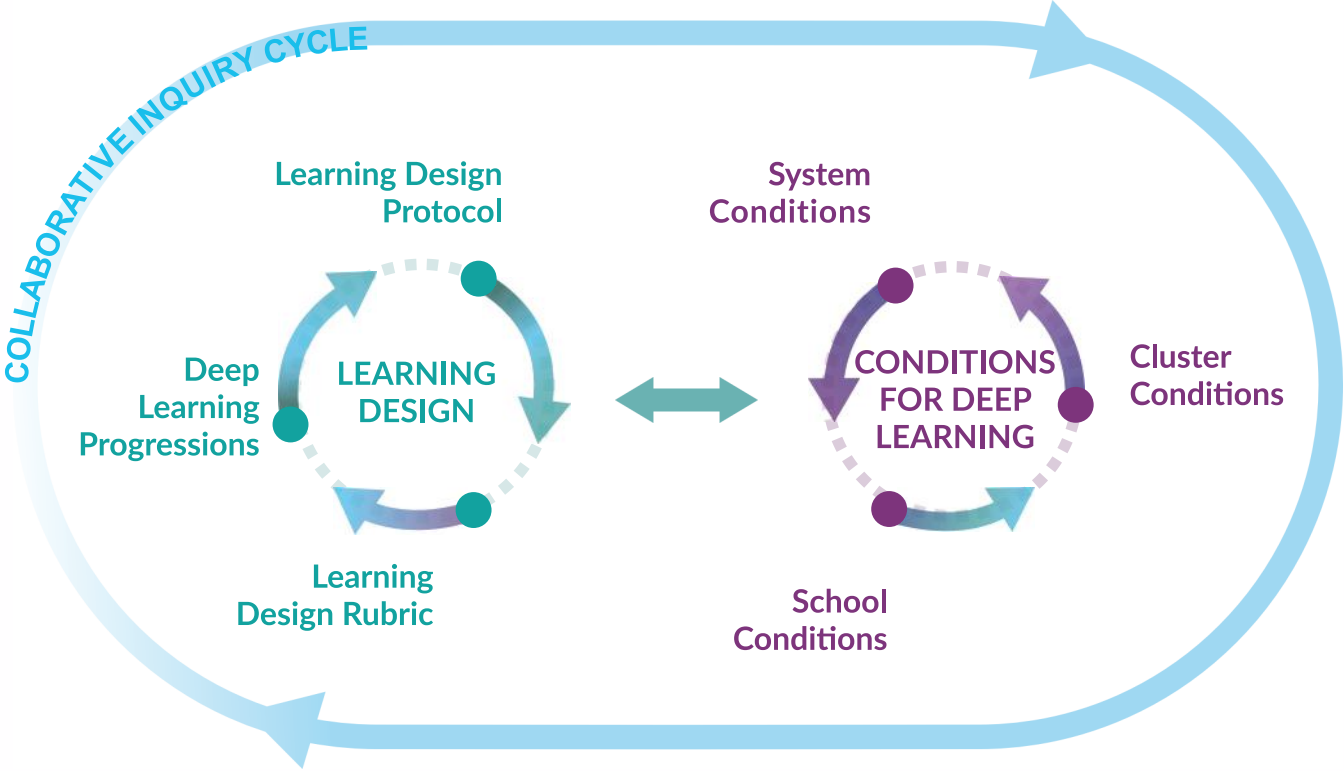
Figure 1: NPDL tools and processes, detailed throughout this report, that facilitate deep learning outcomes.

The tools were developed in accordance with NPDL's model for whole-system change, in which local leadership teams work together and with NPDL's global leadership team in order to then support participants in their own "Clusters" of schools. NPDL Clusters are comprised of groups of schools in each of the six countries listed above. Clusters include personnel working at national, regional, and local school levels. NPDL has been co-designed by leaders at global and Cluster levels of the initiative, and continues to change and adapt as learning from throughout the partnership influences partnership design and direction.

Given these global foundations, the language of the New Measures was kept sufficiently broad to allow for application in any local context. Clusters of schools are using the same tools, interpreted for use within their own unique education systems, to assess, design, implement, and reflect on deep change processes that drive and enable deep learning outcomes for all learners.

The components of the New Measures for which NPDL has collected data are:

- **Deep Learning Progressions** – Measure and track student progress in developing deep learning competencies

- **Deep Learning Conditions Rubrics** – Measure the system, Cluster and school conditions that support deep learning outcomes

- **Deep Learning Exemplars** – Examples and descriptions of learning designs and learner outcomes that describe deep learning

Collecting evidence from NPDL's Clusters of schools allows us to examine the impact of NPDL in the following areas:

Deep Learning
- Is deep learning making a difference for students around the world?
- Do we have the deep learning competencies "right"; are they meaningful and effective?
- What conditions embed and sustain deep learning?

New Pedagogies
- How are new pedagogies central in effecting change?
- Does embedding the new pedagogies really build deep learning competencies in all students?
- What aspects of the new pedagogies have been understood, embraced, and/or utilized most effectively?
- How well has NPDL's digital vision been realized? Where has digital been leveraged effectively, and in what ways?

Capacity Building
- Has it been possible to build the capacity required to bring NPDL to life?
- Are there any baseline conditions required to truly embed and sustain deep learning?
- How well has NPDL, as a partnership, developed the capacity to create genuine system change?
- What has proved successful and challenging in working within and to shift the system?

Global Reporting

This first global report is intended to provide a description of the global baseline level of deep learning as demonstrated by the words, work samples, and other submitted data of NPDL participants in each Cluster of schools. In addition, this report will highlight early findings regarding the conditions consistent with deep learning development, methods for successful navigation of implementation challenges, and the early impact of deep learning both for students and educators. The baseline data provide a foundation with which to inform NPDL work at the classroom, school, Cluster, system, and global levels.

The following are important points regarding the evidence collected and described in this report:

- A total of 837 teachers submitted Deep Learning Progression ratings for a total of 17,122 students; 95 teachers submitted Deep Learning Exemplars; and School Deep Learning Conditions ratings were submitted by 157 school leaders. These numbers represent a small percentage of the teachers and school leaders involved with NPDL globally, and data described throughout the report should be treated as early and emerging.
- All data shown in this report, with the exception of a brief case study involving a single group of schools, represent total data collected globally from NPDL's six Clusters of schools.
- Clusters, districts or regions of schools, individual schools, and all participants remain anonymous throughout the report.
- The amount of collected data varies between Clusters and among regions within Clusters, as does the length of time participants have been working with NPDL.
- Evidence from Clusters has been gathered during individual interviews and throughout their involvement with the global partnership.

DEEP LEARNING

> *Deep learning engages students in the mastery of academic content, creation of new knowledge, and development of deep learning competencies, all of which combine in the formation of actions and responses that drive their learning, their lives, and the world forward.*

NPDL Global Partnership

Deep learning embodies the explicit focus, practice, and outcomes NPDL hopes to achieve at every level of the education system. Six deep learning competencies (6Cs) describe the outcomes of deep learning enabled by new pedagogies: Character, Citizenship, Collaboration, Communication, Creativity, and Critical Thinking.

The 6Cs

The NPDL model involves capacity building support for Clusters, which implement the tools and processes as best fits their own unique context. In all aspects of the initiative, Clusters have been given choice in what to focus on and how that focus would manifest itself in daily and strategic practice. One example of this choice is around the 6Cs. For some Clusters, the 6Cs were the launching point – the vehicle for engaging teachers around deep learning and to get them excited about the opportunity to develop these competencies in their students. Schools that have focused on embedding the 6Cs in everyday classroom life have found success in developing a culture of creativity, innovation, and reflection.

At a deeper level, Clusters also determined whether to focus on any of the 6Cs specifically, or to leave that choice to individual schools and teachers. Approaches varied throughout the Clusters, from determination of a Cluster-wide focus competency to complete choice for schools and teachers. Among those Clusters in which a common focus competency was selected, the group determining the focus varied from school leaders, to the Cluster Team, to the Department of Education. Selection processes involved discussions around participants' strengths and areas for improvement, with one Cluster commenting, "This was the participants' choice, their need. They said that if they didn't focus on collaboration then deep learning wasn't going to work." Here, Collaboration was not only a competency participants hoped to develop in students, but rather a central, developmental focus for all. This focus strengthened the Cluster's collective cognition and helped members fully embrace the process of learning from and with one another.

In an alternative model of implementation, rather than collectively determining a common focus throughout the Cluster, other Clusters gave teachers complete choice in which and how many competencies would be their focus. In these instances, participants noted that the opportunity to assess learner needs and design learning accordingly proved highly motivational and engaging for teachers. While each context varies in need and approach to the 6Cs, gathered evidence has demonstrated the power and importance of self-directed teaching and learning in exciting participants about deep learning and embedding it deeply in culture and practice. In all cases, teachers had some degree of choice in selecting focus competencies, whether it was complete discretion or the opportunity to focus on competencies in addition to the one selected as the common focus.

Table 1 displays the percentage of students rated on each of the six deep learning competencies, shown as a percentage of total students rated.[1]

Character	14%
Citizenship	7%
Collaboration	88%
Communication	27%
Creativity	9%
Critical Thinking	9%

Table 1: Percentage of total rated students who were rated on each of the competencies.

1. Some students were rated on multiple competencies. The percentage of students rated on the Collaboration Deep Learning Progression reflects one Cluster's decision to rate all students' development of the Collaboration competency.

Deep Learning Progressions

Teachers measure student development of the 6Cs with the *Deep Learning Progressions*. The Progressions are designed to:

- Describe what learning looks like at each level of a fluid progression
- Provide a shared language and common understanding for developing and measuring deep learning outcomes
- Measure and track student progress in developing each of the six deep learning competencies

In the Deep Learning Progressions, each deep learning competency is broken into dimensions that combine to provide a complete picture of the skills, capabilities, and attitudes that contribute to success in the 6Cs. For each dimension, they describe what learning looks like for students who display *Limited, Emerging, Developing, Accelerating,* or *Proficient* evidence of development for that dimension. Teachers rate their students' level of development based on the descriptions provided and the range of evidence demonstrated by student work and behaviors. Due to the level of complexity and detail of the Progressions, participants have found value in taking the time to work through and fully understand the tools before using them to rate students' level of progression. Globally, 837 teachers submitted baseline Progression ratings for a total of 17,122 students.

FERTILE GROUND

Going Slow to Dive Deeper

"There are certain things that people need to have space for, to understand about the project, in order to make a shift in their practices. That's not something that happens quickly. We need to be patient and be consistent and clear in our communication. We need to be working with [participants] and guiding them throughout the process. It's hard when you dive into a system that is totally different than what you're used to."

   Cluster Leader

The Clusters and regions that have most quickly adopted NPDL have had a solid foundation on which to begin their work with deep learning. Schools have picked up the processes more easily when they've already had experience with innovative practices, and when there's been a general sense of the need to change. Additionally, learning is deepest when schools and individual teachers are encouraged to take their time to develop knowledge and understanding of NPDL before fully implementing the tools. The NPDL framework marks a significant shift from what most participants are familiar with, and those new to the initiative have found success in first wrapping their heads around deep learning, what it means for them, and how NPDL tools and processes will impact thinking, teaching, and learning. From here, differentiated support provides participants with what they need to feel confident and be successful with NPDL focuses such as designing deep learning experiences and measuring outcomes.

Participants understand that deep learning does not happen over night. It takes time for it to reach individual learners, let alone spread throughout an entire school, Cluster, or education system, and there's no shortage of challenges involved in getting to the point where deep learning is truly embedded in all we do.

One common implementation aim is to focus on a small number of elements deeply (i.e. one or a couple of the 6Cs). As an example, over 95% of students were rated on two or fewer deep learning competencies in the first rating period.

Percentage of students rated on each number of competencies:

One Competency	54.9%
Two Competencies	40.5%
Three Competencies	2.9%
Four Competencies	0.9%
Five Competencies	0.3%
All Six Competencies	0.5%

Along with deep learning competency dimension ratings, teachers also provide a rating for each student's overall achievement in terms of competency development. When making this overall rating, teachers are encouraged to consider every dimension of the given competency and come to a decision regarding overall development. Figure 2, below, displays baseline overall ratings for each of the 6Cs at each level of the progression.[2]

Overall Progression Ratings

	Character (219)	Citizenship (154)	Collaboration (334)	Communication (171)	Creativity (108)	Critical Thinking (185)
PROFICIENT	3%	1%	1%	1%	2%	3%
ACCELERATING	8%	7%	7%	6%	7%	15%
DEVELOPING	22%	17%	18%	27%	36%	28%
EMERGING	40%	33%	46%	34%	40%	31%
LIMITED	27%	42%	28%	32%	15%	23%
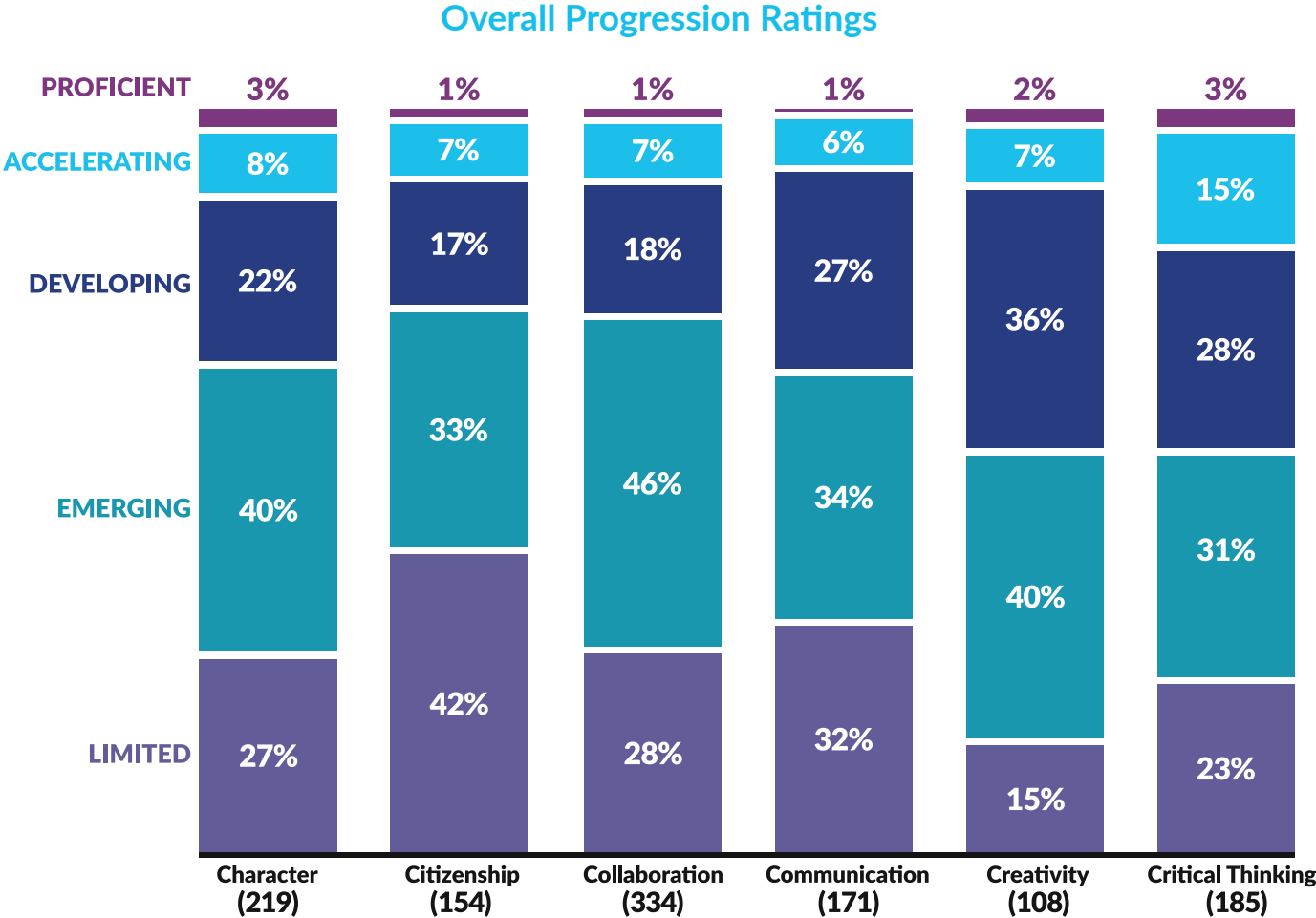
Figure 2: Baseline overall ratings for each of the 6Cs at each level of the Progression.

Across all the 6Cs, over 50% of students were rated as demonstrating either *Limited* or *Emerging* evidence of each deep learning competency. As a baseline, the competencies on which students demonstrate the highest level of progression are Creativity and Critical Thinking. Only 15% of students were rated as demonstrating *Limited* evidence of Creativity, and 46% of learners were rated at the *Developing, Accelerating,* or *Proficient* level on the Critical Thinking progression.

With the exception of Citizenship, all competencies show the greatest number of students rated at the *Emerging* level of the progression. Globally, the Citizenship competency yielded the lowest baseline ratings, as 75% of rated students are at either the *Limited* or *Emerging* level, and 42% were rated as demonstrating *Limited* evidence of development. NPDL defines Citizenship as

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2. Not all Clusters asked their teachers to provide an overall rating for the Deep Learning Progressions. Therefore, the graph represents data collected from Clusters whose teachers submitted overall ratings.

thinking like global citizens, considering global issues based on a deep understanding of diverse values and worldviews, and having a genuine interest and ability to solve ambiguous and complex real-world problems that impact human and environmental sustainability. Across the dimensions of the Citizenship competency, students demonstrated the highest level of progression in their genuine interest in human and environmental sustainability, and the lowest level of progression in their development of a global perspective. Issues that impact global sustainability and success are meaningful and interesting to the lives of learners throughout the world. Learning that nurtures this interest and helps students develop a global perspective will support them to understand and solve the issues that are meaningful to their own lives and the global community.

While citizenship is an emerging educational focus strengthened by increasing global connectedness and awareness, collaborative learning has long been a staple of education. However, the baseline overall ratings show that 74% of students demonstrate *Limited* or *Emerging* development of the Collaboration competency, with 46% of students rated at the *Emerging* level. Although students may collaborate on a regular basis, overall competence in collaborating *deeply* is still emerging. Proficient collaboration does not simply rely on the quality of a group's work product. It encompasses students' ability to manage team dynamics and challenges, make substantive group decisions, and learn from and contribute to the learning of others. The development of strong interpersonal and team-related skills will benefit learners throughout their lives, and contribute to the creation of new, collective knowledge for sustained success.

Teachers' ratings make a strong statement regarding students' current level of progression in the deep learning competencies. A majority of competencies show under 10% of students in the *Accelerating* and *Proficient* levels, meaning learners' development of the deep learning competencies is widely in its initial stages. Teachers have identified the need for further developing these competencies in their students, and, as demonstrated throughout this report, are already finding success in designing and implementing learning that facilitates the development of the 6Cs.

Deep Learning Conditions

The *Deep Learning Conditions Rubrics* operate concurrently with the Deep Learning Progressions to allow measurement of how school, Cluster and education system conditions support deep learning outcomes. School Conditions ratings, submitted by school leaders from 157 NPDL schools, mirror the story of Deep Learning Progression ratings regarding the baseline level of deep learning development in schools around the world. The graphic to the right displays baseline overall school conditions for deep learning ratings, determined on a progression of *Limited*, *Emerging*, *Accelerating*, and *Advanced* evidence.[3]

14.7% ACCELERATING EVIDENCE

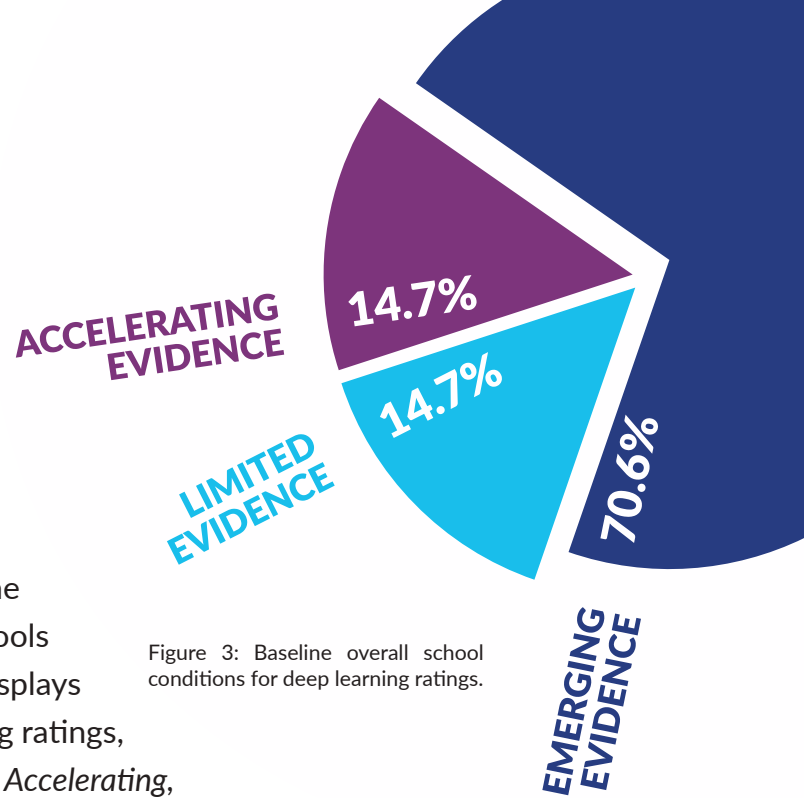**14.7%** LIMITED EVIDENCE

70.6% EMERGING EVIDENCE

Figure 3: Baseline overall school conditions for deep learning ratings.

As with teachers' overall Progression Ratings, the majority of Conditions ratings are at the *Emerging* level, demonstrating school leaders' general belief in the need to improve the school conditions that will further enable deep learning outcomes for students. Of the NPDL schools that submitted overall ratings, none rated their school conditions at the *Advanced* level. Each school has indicated that their conditions can progress beyond the baseline to further facilitate the advancement of deep learning and the development of deep learning outcomes.

The School Conditions for Deep Learning Rubric describes *Limited*, *Emerging*, *Accelerating*, and *Advanced* levels of progression for six dimensions:

- **Capacity Building** – Effectively assessing professional learning needs and developing a comprehensive, collective approach to building school capacity.
- **Creating a Culture of Learning** – Forming learning partnerships between and among students, educators, families, and the wider community, and supporting the process of innovation.
- **Leading Deep Change** – The capacity of leaders at *all* levels of the school to commit to the process of deep learning, and to engage the school and wider community in deep learning as well.
- **Leveraging Digital** – School-wide clarity around how each digital element can be leveraged to deepen student learning.

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3. Not all Clusters asked their teachers to provide an overall rating for school conditions. Therefore, the graph represents data collected from Clusters whose teachers submitted overall ratings.

- **New Measures and Evaluation** – Teacher and school leader capacity for developing and measuring 1) students' deep learning outcomes, 2) teacher capability in the new pedagogies, and 3) the necessary school conditions for deep learning.
- **Vision & Goals** – Developing clear and concise goals centered on deep learning outcomes, teacher capability, and school conditions, and having a well-defined strategy for achieving them.

Dimension ratings will be examined throughout this report alongside further evidence of the current conditions and outcomes existing in and across education systems today.

As with the 6Cs, Clusters have taken varying approaches to implementing NPDL's Suite of Tools. In many cases, Clusters have limited the focus on measurement in their early work with NPDL, ensuring participants were comfortable with the tools before using them to assess learners or conditions. With the exception of one Cluster that emphasized data submission Cluster wide, the teachers and School Leads who submitted Deep Learning Progression ratings and Deep Learning Conditions ratings acted largely independently and with limited submission support. This general lack of emphasis greatly contributed to the overall level of data *submission*, but does not reflect participants' level of engagement with the tools or their recording of ratings for personal use. A heavier focus on data submission will come as a result of increased comfort with and capacity to use the New Measures.

LEVERAGING LEARNING

Assessment – Working with the Tools

NPDL's *Suite of Tools* marks a shift not only in what educators are measuring, but also in the level of freedom and flexibility to implement tools in ways that work for teachers, leaders, and learners. For many, NPDL processes are completely new, and Clusters have highlighted the challenges in determining how to best use the NPDL tools throughout the learning and assessment processes.

Teachers have self-identified the assessment of evidence in real-time as an important area for growth. They are looking for alternative assessment and reporting tools to assist in the assessment of deep learning competency development, both in real-time and at all stages of the learning process. Further developing the capacity to recognize

deep learning while it is happening is a primary focus in Clusters throughout NPDL.

These challenges are highlighted by NPDL school leaders in their School Conditions ratings. Of the six dimensions of the School Conditions Rubric, *New Measures and Evaluation* is the least developed globally, with 50% of schools rating their capacity with the New Measures as *Limited*.

Participant Tips for Navigating the Challenge

- Clusters that have found success using the NPDL tools for real-time improvement have taken time to first understand what the tools are saying and how they work before using them to assess competency development. The language of deep learning and the Suite of Tools help schools, teachers, and systems focus on what really matters and measure what they value.
- Clusters have noted the importance of professional learning targeted at assessment, which has been identified as an area for development by schools throughout NPDL.
- The New Pedagogies Learning Design Protocol and Rubric, along with the creation, implementation, and moderation of deep learning experiences, have played significant roles in helping teachers understand how all the tools fit and work together toward developing deep learning competencies.

ADVANCED 2%

ACCELERATING 11%

EMERGING 37%

LIMITED 50%
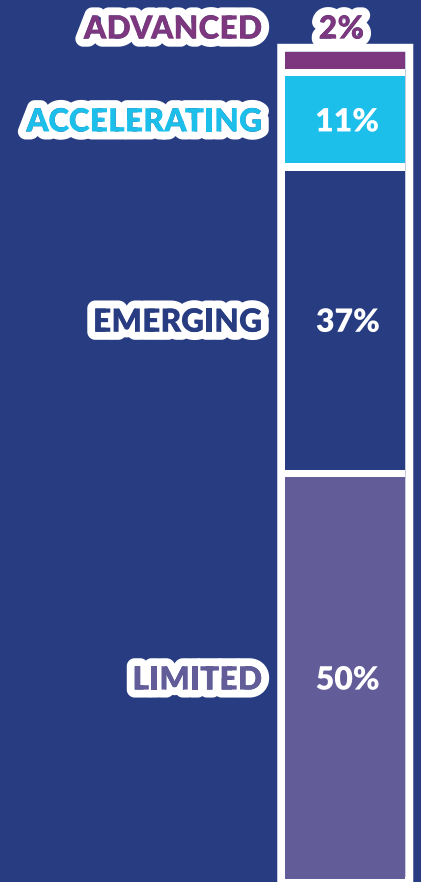
New Measures & Evaluation (156)

Impact

Evidence shared and collected from NPDL Clusters demonstrate a common perception of the impact of deep learning in its early stages. Firstly, the impact of deep learning on teachers and leaders is profound and strikingly evident. In many instances, the excitement around deep learning expressed by teachers and school leaders has been at a level unmatched by the introduction of any other initiative. It empowers teachers to make professional decisions around what and how to teach their learners, and opens the door to a wealth of possibilities for teachers to work with and understand their learners at a level never before reached. Cluster leaders have experienced the same connection to the goals sought and made possible through deep learning, describing their work as "joyful" and celebrating the "genuineness in the exchange of ideas." As stated by one Cluster leader, NPDL has instilled participants with "a kind of relief. [This is] something they've been waiting for so long. Now their ideas have a name, a structure, and it's not too tight. It gives them space for their own development and is giving them direction."

> *If you introduce any project it becomes a galvanizing focus, but some of these fall early because there's no substance, others later on because there's no process or sustainability, or because there's no depth of expertise to lift it to the next level. NPDL has stuck because it has the procedures and tools and is sustainable.*
>
> ## Cluster Leader

Participants have also expressed and measured the need for improving students' deep learning outcomes. Globally, the vast majority of learners are still developing their performance in the deep learning competencies, and all schools have measured the need to strengthen their conditions in order to support deep learning. The way in which learning has been facilitated and designed in the past has not effectively addressed the need for developing the deep learning competencies. Participants at all levels of NPDL have recognized and embraced this finding, acknowledging that NPDL is the "beginning of a journey" – one they are committed to continuing, and that they truly believe will bring learners to that level of knowledge, skill, and self-understanding so essential for living fully for themselves, others, and the world. At this stage, participants express a clear and consistent message regarding the outcomes they hope to achieve for all their learners: *We're not there yet, and we're confident that deep learning is what will get us there.*

Even in the early going, there's no shortage of cases describing and demonstrating the effect of deep learning on students, teachers, parents, and the community. Students are already beginning to see the world in new and meaningful ways, due in large part to the impact of new pedagogies in facilitating the development of deep learning competencies.

Deep Learning *Progression*

Now that baseline data has been collected, NPDL will look to measure overall movement with regard to the baseline, as well as individual learner progression at multiple points in their learning process. While almost all submitted data measures a single point in students' level of progression, teachers from one group of NPDL schools (referred to here on as "Region A") rated their learners' deep learning progression from the beginning of their journey with deep learning to the end of their first academic year following NPDL's introduction.

The following data represents overall Deep Learning Progression growth, across all of the deep learning competencies, from less than a full academic year of work with deep learning and the new pedagogies.[4]

Movement	Count	Percentage
Up three levels	4	3
Up two levels	29	18
Up one level	83	53
No change	40	25
Down one level	1	1

Table 2: Overall Deep Learning Progression growth across all of the deep learning competencies.

Of the 157 matched student ratings across each of the 6Cs, over 73% demonstrate progression in deep learning competency development, with over 21% of matched student ratings measuring two or more levels of progression.

Students with matched ratings for Citizenship, the competency for which learners' baseline level of development is the most widely limited globally, experienced significant growth in their development of the competency.
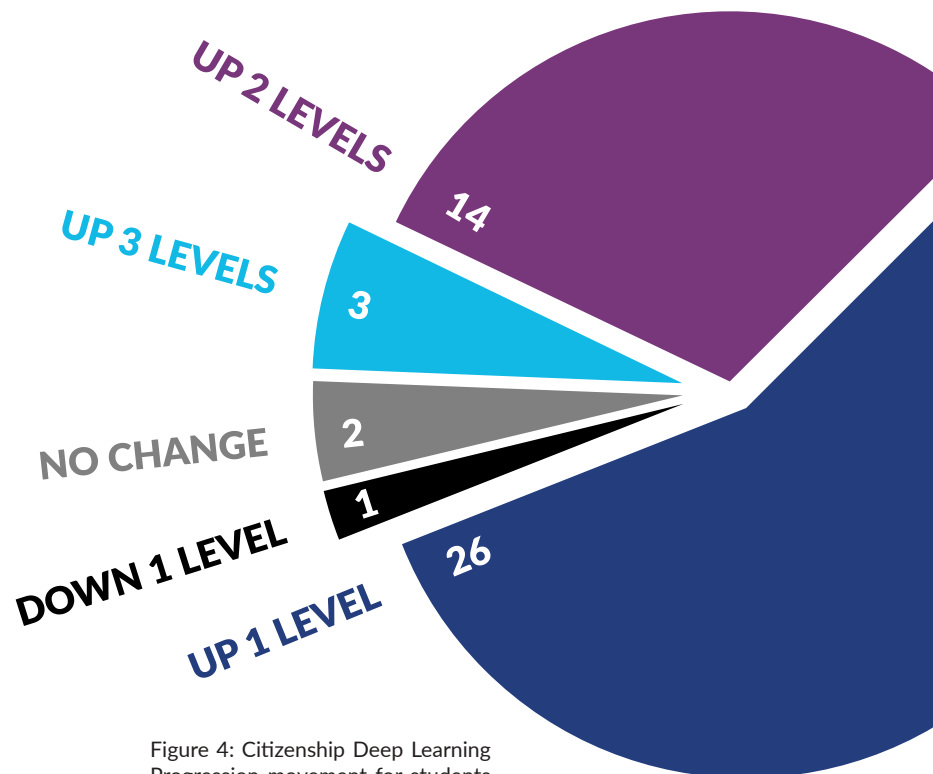
Figure 4: Citizenship Deep Learning Progression movement for students in Region A.

UP 2 LEVELS 14
UP 3 LEVELS 3
NO CHANGE 2
DOWN 1 LEVEL 1
UP 1 LEVEL 26

4. Data from Region A includes all matched data submitted for the same student in separate rating periods. Some students were rated on multiple competencies. Region A did not submit any ratings on the Creativity Deep Learning Progression.

Of the 46 students with matched data, over 93% advanced along the Citizenship Deep Learning Progression, with over 37% progressing multiple levels.

The growth in Region A was experienced over less than a full year's involvement with NPDL, and reflects the effect of learning in the new pedagogies on the development of the competencies students need for success.

Future NPDL reports will explore progression on the deep learning competencies for students globally, helping to further the global understanding of the impact of deep learning on competency development and improved student outcomes.

Key Findings: Deep Learning

- NPDL marks a significant shift from the tools and processes with which most participants are familiar. Clusters have found success in taking the time to develop a shared understanding of deep learning and the NPDL process from the outset, diving deeply into the framework to then build together from a solid, collective knowledge base.

- Developing a thorough understanding of the tools, dedicating resources for assessment-focused professional learning, and engagement with the New Pedagogies Learning Design Protocol in the creation of deep learning experiences have all had a positive impact on New Measures and evaluation in NPDL Clusters.

- Baseline Deep Learning Conditions and Progression ratings demonstrate the need to develop the conditions and outcomes consistent with deep learning. Participants are embracing the journey and believe deep learning is the path to improving outcomes for all learners.
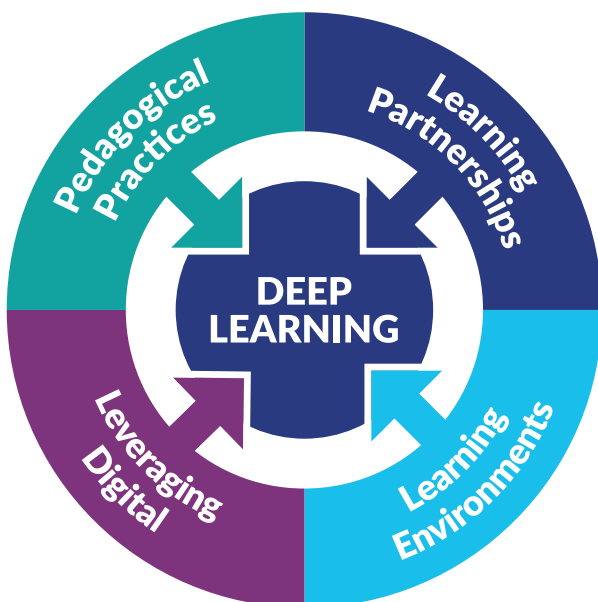
NEW PEDAGOGIES

> *The new pedagogies build on a foundation of powerful pedagogical practices but fuse them with emerging innovative practices that foster the creation and application of new ideas and knowledge in real life. Educators must hone a deep knowledge of the learning process and use digital as an accelerator in the scaffolding of experiences and challenges finely tuned to the needs and interests of students and maximized through relevance, authenticity, and real-world connections.*

NPDL Global Partnership

The following elements mobilize deep learning and combine to form the new pedagogies:

- **Learning Partnerships -** Cultivated between and among students, teachers, families, and the wider environment.

- **Pedagogical Practices -** Used to design, implement, monitor, and assess learning.

- **Learning Environments -** Foster 24/7 interaction in trusting environments where students take responsibility for their learning.

- **Leveraging Digital -** Accelerates access to knowledge beyond the classroom and cultivates student-driven deep learning.

"The four elements of the new pedagogies triggered an 'aha' moment – they made teachers think about how they were designing their learning."
Cluster Leader

"A strength has been being able to talk about and identify depth, look at how we've grown over a year, and say where we are on the continuum of the four quadrants of the [new pedagogies] framework. That's where we're building strength."
Cluster Leader

Figure 5: The four elements of the new pedagogies mobilize to deepen learning.

Each of the four elements of the new pedagogies play a crucial role in the process of deep learning, and are shown to be most powerful when working seamlessly together in the design, creation, and implementation of deep learning tasks and experiences. Observations from teachers and Cluster leaders, as well as the learning demonstrated in teachers' Deep Learning Exemplars, describe the interaction of deep learning and the new pedagogies in new and exciting ways that lend important insights into the life of deep learning in the classroom and beyond.

Deep Learning Exemplars are examples of learning design, implementation, measurement, and outcomes that provide a description of how deep learning develops and what it looks like in action. The deep learning experiences take place in schools throughout NPDL, and are then described by teachers in their submission of documents, files, reflections, videos, or any other means of description. The following New Measures support teachers in their work with deep learning experiences and Exemplars:

- The *New Pedagogies Learning Design Protocol* supports teachers in the design of deep learning experiences.
- The *New Pedagogies Learning Design Rubric* facilitates the assessment of deep learning experience design, and is used in the processes of deep learning experience moderation and re-design.
- The *Deep Learning Exemplar Protocol* can be used to reflect on and describe deep learning experiences.
- The *Teacher Self-Assessment* supports teachers in identifying areas of strength and those in need of improvement in implementing deep learning.

> *The Learning Design Protocol has been a surprise for us; participants didn't think they would need it and it's turned out to be pivotal.*
>
> **Cluster Leader**

The *Collaborative Inquiry Cycle* plays an integral role in NPDL work at all levels of the initiative, supporting participant collaboration, new knowledge creation, and shifts in practice. The tools described above and earlier in this report inform the four principles of the Collaborative Inquiry Cycle (Assess, Design, Implement the Learning, and Measure, Reflect, and Change) in the facilitation of the deep learning experience process:

Assess

The Deep Learning Progression Ratings, New Pedagogies Learning Design Rubric, Teacher Self-Assessment, and Deep Learning Conditions Ratings anchor assessment and understanding of the strengths and needs of students, learning designs, teachers, schools, Clusters, and systems.

Design

The New Pedagogies Learning Design Protocol facilitates the creation of deep learning experiences that address identified areas for improvement.

Implement the Learning

Deep Learning Exemplars provide rich examples of successful, local implementation that then support implementation globally.

Measure, Reflect, and Change

The New Measures facilitate interwoven, multi-faceted measurement, guide participant reflection, and support constant learning, all of which inform changes that improve learning and its outcomes.

Globally, 95 Exemplars were submitted describing deep learning experiences and their impact on the lives and learning of students, teachers, families, and members of the community. The following sections examine each element of the new pedagogies in light of the learning described by educators through deep learning experiences.

Learning Partnerships

Enhanced by deep learning, strong learning partnerships are being formed and cultivated in NPDL Clusters and schools around the world. Partnerships have formed between and among students, teachers, parents and families, community members, schools, and Clusters, and are driven by the concept of using collective cognition to make positive changes in our lives and the world.

Sharing of Knowledge, Collective Cognition, and Collaboration

Within schools, student collaboration and knowledge sharing has grown as a direct result of the new pedagogies. Students are providing critical and constructive peer feedback, discussing key task decisions to collectively determine the best way forward, and sharing their learning both within and between classes and grade levels. Due in large part to the power afforded by digital technologies, students are also connecting with other students and community leaders all throughout the world, expanding their understanding of worldviews and the interconnectedness of our lives.

"Teachers observed if pupils were able to find relevant information, gather it, and teach it to younger pupils."
        Teacher

"Students explored and mapped their local community, learned about communities around the world, and paired up with a school in South Korea to share information about our respective communities."
     Teacher

New learning partnerships are dramatically impacting the lives of adults as well, who are learning to collaborate in ways that deepen their own and their students' learning. Schools and regions that otherwise would not have connected, often due to geographical distance, have connected through a common and engaging focus on NPDL. Clusters also highlight the confidence and willingness of teachers and school leaders to help other schools set up and sustain the NPDL process. Their deep level of engagement has resulted in the desire to spread NPDL teaching and learning to as many schools and students as possible.

One thing that came up as very positive was the exchange between different schools and the good receptions between different principals at both high schools and primary schools. In the evaluation of workshops, they mentioned that they enjoyed working together with the other School Leads. Their working together is an opportunity for acceleration.
     Cluster Leader

Partnering with Parents and the Community

The introduction of deep learning experiences grounded in the new pedagogies has taken learning outside the classroom walls in ways that engage parents, families, and the community. Exemplars describe powerful partnerships formed by students in order to help them not only solve their task, but make positive contributions to the world that extend far beyond any academic applications. In the more advanced examples, students' peers, teachers, parents, and community members contribute to their competency development and achievement of other project-specific goals, and all engage in learning of their own in the process. Teachers reflected on their desire to bring parents and community members into the deep learning experience process even earlier, involving them in the inquiry process and ensuring they have a clear understanding of the learning partnership.

"I was able to watch my son smile and laugh along with his peers and with his teachers, as well as learn valuable information about our local communities."
     Parent

"The learning partnerships quadrant is a strength for us. What we've seen is that whether it's bringing in parents and kids as partners or bringing in experts from the community, there's a lot of fertile ground in that one quadrant of the framework."
     Cluster Leader

Key Findings: Learning Partnerships

- Learning partnerships between students are cultivated in the new pedagogies, leading to improved collaboration and knowledge sharing within classes and between grade levels.

- Student agency has been strengthened by new relationships in which students and teachers are partners in the design, implementation, and measurement of learning.

- Leveraging digital has enabled connection between students, community leaders, and experts located in areas all throughout the world.

- Partnering with parents, families, and members of the community has strengthened learning outcomes and student engagement, and resulted in learning for all involved. The most equitable learning partnerships engage family and community partners in all phases of the learning experience.

DEEP LEARNING EXPERIENCE*

LEARNING PARTNERSHIPS FOR A BETTER WORLD

Title: What Can We Do to Help Refugees?

Focus Competencies: Citizenship, Collaboration

Curriculum Areas Covered: Art, Humanities and Social Science, Literacy

Student Ages: 12-14

Learning Activity Length: 7 months

After learning about the immigrants who contributed to the formation of their country, students were inspired to learn more about immigrants entering the country today. Students researched, wrote, produced, and performed a play intended to 1) educate other students, families, and the community about refugees, and 2) raise funds, through ticket sales, for refugees coming into their community.

"Students were moved by what is happening to the refugees and surprised by the stereotypes and differing social attitudes toward helping refugees."
Teacher

Curriculum Expectations:

- Investigate perspectives of different groups on the Refugee Crisis and how it affects the country.
- Analyze the major challenges facing different groups and examine the actions country members have taken to improve their lives.
- Through drama, communicate multiple perspectives, feelings, and possible outcomes related to the immigration of refugees.

"Students learned how to take their own ideas and questions and make them better using the expertise of other people... Disagreements among group members drove the students to learn more about different aspects, communicate their thoughts with one another, and incorporate agreed upon elements into the play."
Teacher

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* This and each of the following deep learning experiences included in this report describe real learning experiences shared by NPDL teachers in their submission of Deep Learning Exemplars. They highlight new pedagogies learning design elements that have successfully developed deep learning outcomes.

Learning Partnerships:

- Families were involved from the start – they were able to express ideas and concerns and work through them; helped with play props and coming to watch the play; and expressed how their children were passionate about educating others and shared their learning at home.
- The students were able to use peer/parent feedback from one show to the next to make improvements.
- Everyone approached by the students, in both the school and the community, was willing to help out in whatever way they could.
- From play ticket sales, students raised over $1,000 to donate to the local Refugee Committee.

"Passionate about making a difference in the lives of others..."

"Engaged, digital citizens..."

Key Points of Learning

- Multiple curriculum focuses provide students with the opportunity to explore the issue from multiple perspectives and communicate through a variety of channels.
- Students' engagement leads to deep learning that sticks. Their passion about making a difference resulted in positive disagreements that helped the learners share and communicate their thoughts and opinions in order to collectively determine the best way forward.
- Students formed learning partnerships with other students, parents, families, and the community to raise awareness of an important, real-world issue, and used their learning to make a difference in their own lives and others'.

Pedagogical Practices

NPDL is changing the way learning is designed, implemented, and assessed. For starters, these responsibilities no longer lie solely with teachers – students themselves are becoming partners in the design and assessment of learning that is meaningful and multi-focused.

FERTILE GROUND

Meaningful Learning Design

"Learning is deepest when it connects to students' lives – who they are, how they fit into the world, and how they can contribute back."
  NPDL Global Director

In the best examples of effective pedagogical practices in deep learning experiences, students design or co-design their learning, often in collaboration with other students, teachers, parents, and community members; reflect on their learning both during and after the experience is complete, using peer and other feedback in pivotal moments to decide on the best possible way of proceeding; and assess their own growth and learning based on success criteria set for and by themselves and/or the group. Leveraging digital has been a crucial component of almost all deep learning tasks, as it allows students to enhance and augment their learning as well as their final product, and opens the door to a wealth of opportunities for sharing and connecting with learning partners of all kinds.

Teachers' Exemplars demonstrate the capacity to design learning that develops student capability in the deep learning competencies. Designing for deep learning has provided teachers with the tools and way of thinking that support them to first understand what their students need to learn, and then determine how to best design the learning so as to facilitate learners' development of the 6Cs *through* their engagement with the curriculum. Similarly, successful deep learning design deepens student performance in the curriculum as a direct result of the new pedagogies and the deep learning competencies they develop.

Table 3 displays the percentage of Exemplars that identified each competency as a focus, compared to the percentage of students rated on each of the 6Cs.[1]

Deep Learning Exemplars		Deep Learning Progression Ratings	
Competency	Percentage	Competency	Percentage
Character	31	Character	14
Citizenship	44	Citizenship	7
Collaboration	52	Collaboration	88
Communication	37	Communication	27
Creativity	34	Creativity	9
Critical Thinking	46	Critical Thinking	9

Table 3: Percentage of Exemplars that identified each competency as a focus, compared to the percentage of students rated on each of the 6Cs.

Each competency was identified as a developmental focus on over 30% of submitted Exemplars, demonstrating teacher confidence in designing learning that develops each of the 6Cs. The greater challenge experienced in teachers' early work with deep learning, as emphasized earlier in this report, involves the measurement of students' deep learning development in real-time and at multiple points in the learning process. Teachers who have worked deeply with the process of designing deep learning have provided powerful examples of real-time, deep learning measurement. Increased comfort with and understanding of deep learning design on a global scale will greatly contribute to increased assessment capacity, providing key insights and linkages through concrete deep learning experience design and implementation.

"

The driving question for planning our deep learning task was to combine naturally suitable things from students' curriculum...and plan the project so that Character skills can be practiced and evolved.

Teacher

1. The percentage for the Collaboration Deep Learning Progression reflects one Cluster's choice to assess all rated students on Collaboration. This Cluster did not ask teachers to submit Deep Learning Exemplars.

Deep Learning Design as a Catalyst for Assessment

The design of deep learning experiences has supported teachers in their use of the New Measures, providing opportunities to measure student development of deep learning competencies alongside the effectiveness of their learning design. At the beginning of their work with deep learning design, one Cluster created a template for Exemplar design, which was then shared with and adapted by other Clusters as well. Teachers who worked with the Exemplar template provided reflections on each of the four stages of the Collaborative Inquiry Cycle, in relation to the learning experience; measurements of the learning experience's effectiveness in each of the four elements of the new pedagogies, using the New Pedagogies Learning Design Rubric; and measurements of students' level of focus competency development pre- and post-experience, using the Deep Learning Progressions. Considering the challenges voiced by Clusters regarding the use of the New Measures for deep learning assessment, it's important to note that participants are demonstrating opportunities for developing measurement capacity through deep learning design rooted in the Collaborative Inquiry Cycle.

The leveraging of **cross-curricular learning** is a staple of new pedagogies learning design. Teachers are finding ways to link or align the deep learning competencies with national and local curriculum, and have found that learning is deepened when multiple curriculum areas are focused on and incorporated into the deep learning experience. Of the submitted Deep Learning Exemplars, 68% covered multiple curriculum areas and an average of 2.9 curriculum areas were covered per Exemplar. Within single curriculum areas as well, the focus is on how each learning experience, regardless of length or scope, can be deepened to develop the 6Cs and improve learner outcomes.

LEVERAGING LEARNING

Linking NPDL and Curriculum

One of the major points of emphasis and reflection throughout NPDL Clusters regards the linking or alignment of NPDL concepts and processes with local and national curriculum. Participants have commented on the necessity of forming this link from the outset of work with deep learning, many expressing the belief that a stronger initial emphasis would have proved beneficial for members of their Clusters. Participants expressed the importance of helping teachers and leaders see the links between NPDL and what they're already working on in schools and across the system prior to implementing deep learning on a large scale.

The following provides a teacher's description of how NPDL and national curriculum have been successfully linked to deepen student learning.

"Deep learning tasks are designed based on intimate knowledge of each student, groups of students, and the...year 5 and 6 team as a whole, and take into account individuals' knowledge and ability in the deep learning competencies... We aim to pull in as many different learning areas as possible, as well as trying to link in the learning (Literacy, Math, Inquiry) so that students are making links across curriculum areas, not just in single curriculum silos.

The DLTs [deep learning tasks] have become a tool for us to assess knowledge across a range of curricula. For example, within our National...Reading Standards, students need to 'locate, evaluate and integrate information and ideas within and across a small range of texts appropriate to their level as they generate and answer questions to meet specific learning purposes across the curriculum.' DLTs have allowed us to meet this assessment expectation in a far better way than we have previously.

As a school, we have aligned the 6Cs with [national] Key Competencies. Through this rich process as a staff we have been able to identify very specific goals (criteria) for students to strive to achieve. With this shared understanding and vocabulary, learning needs were identified through observations of students, discussions with them, and knowledge of students from previous years."

Participant Tips for Navigating the Challenge

- As a school/Cluster, begin by forming a strong link or alignment between the 6Cs and existing skills, competencies, and/or curriculum focuses.
- Take time to truly embed the understanding that NPDL is not just an add-on, but an enhancer of what teachers, schools, and systems already were doing and/or had wanted to do before deep learning. It works not against, but rather with and for existing structures and focuses.
- For each deep learning experience, identify the curriculum area/s of focus and describe how/which deep learning competencies and NPDL processes are aligned to and augmenting established learning goals.
- The design of deep learning experiences helps teachers design learning that facilitates student success in the curriculum and their development of deep learning competencies. The curriculum creates opportunities to design deep learning which in turn cultivates student success both in school and throughout their lives.
- Participants are creating relevant assessment materials for use in their own local context, and also sharing resources and materials across Clusters.

Beginning with the alignment of NPDL and curriculum is essential for developing and embedding this powerful understanding of the 6Cs – "they develop through what you design."
    Cluster Leader

Pedagogical practices also encompass the assessment approaches employed by teachers as well as the evidence sources used to assess their learners. The assessment of deep learning necessitates the use of *Authentic Mixed-Method Assessment* – assessment that uses *all* the available evidence about individual learners to arrive at a complete picture of student performance.[2] Measuring student performance on deep learning experiences or development of deep learning competencies requires a broad mix of evidence that clearly describes where each student currently is in his or her learning.

2. Davidson, E. Jane and McEachen, Joanne. Making the Important Measurable, Not the Measurable Important: How Authentic Mixed Method Assessment Helps Unlock Student Potential – and Tracks What Really Matters. Seattle, WA: Learner First, 2015. Print.

When submitting Deep Learning Exemplars as well as Deep Learning Progression ratings, teachers indicate the evidence sources used to measure student performance and development.[3] The following table displays the percentage of teachers who used each number of evidence sources when assessing deep learning experience performance (Exemplars) and development of the 6Cs (Progression ratings), respectively:[4]

Deep Learning Exemplars		Deep Learning Progression Ratings	
Number of Evidence Sources Used	Percentage of Exemplars	Number of Evidence Sources Used	Percentage of Teachers
1-2	42	1-2	59
3-4	13	3-4	15
5-6	9	5-6	9
7-8	11	7-8	7
9-10	9	9-10	4
More than 10	16	More than 10	6
Average number used: 5.4		Average number used: 3.5	

Table 4: The percentage of teachers who used each number of evidence sources when assessing deep learning experience performance (Exemplars) and development of the 6Cs (Progression ratings), respectively.

The data show that a significant percentage of teachers are using one or two evidence sources to assess their learners in areas of deep learning performance. This speaks both to the newness of NPDL's tools and to unfamiliarity with assessment that incorporates a broad range of indicators. Teachers indicated a greater number of evidence sources in assessing deep learning experience performance than in making Deep Learning Progression ratings, as 59% provided one or two evidence sources for determining their Progression ratings and only 26% used five or more. In the submission of Exemplars, 42% of teachers used one or two sources compared to 46% using five or more. Although there is room for growth, the data indicate that deep learning experiences are facilitating the process of mixed-method assessment, providing opportunities for deep learning design that allows students to demonstrate their learning in unique and varying ways. The variety of student work generated through the deep learning experience process contributes to the assessment of competency development, helping to fill the gaps currently present in teachers' use of a strong evidence base in conjunction with the Progressions to determine ratings.

The types of evidence sources used provide a sense of what teachers value globally in the early assessment of deep learning. The most popular evidence sources are strikingly similar across

3. Teachers select evidence sources from a participant-created list of 54 potential sources, which was created to demonstrate the variety of sources from which evidence can be drawn. In addition to selecting from these evidence sources, the option is available for teachers to enter sources that are not included in the provided list.
4. Not all Clusters asked their teachers to provide evidence sources. Therefore, the table represents data collected from Clusters whose teachers submitted evidence sources.

Exemplars and Progression ratings, and the most widely used evidence source for both is *teacher observations.* In the submission of Progression ratings, 22% of teachers selected *teacher observations* as the single source of evidence in determining ratings. While observation is a powerful tool for assessing learners' deep learning development and progression, it should be considered alongside a range of other indicators that more fully describe the level of progression or performance. Strengthening this emphasis will further develop assessment capacity globally.

Table 5 displays data on the most widely used evidence sources for Exemplars and Progression ratings.

Deep Learning Exemplars		Deep Learning Progression Ratings	
Evidence Source	Percentage of Exemplars that include the evidence source	Evidence Source	Percentage of teachers using the evidence source
Teacher Observations	48	Teacher observations	70
Self- and peer-evaluation	43	Rubrics	28
Projects / Deep Challenges	38	Self- and peer-evaluation	22
Interviews	35	Projects / Deep Challenges	21
Student Conferences	35	Interviews	17
Oral Presentations	27	Oral Presentations	15
Reflective Journals	23	Reflective journals	14
Blog Posts	21	Student conferences	10

Table 5: The most widely used evidence sources for Exemplars and Progression ratings.

- Common elements of new pedagogies learning design include: co-design by students, teachers, families, and community members; student reflection on their growth and learning at multiple points in the learning process, using peer and other feedback along with success criteria set for and by the group; and cross-curricular learning that connects to and makes a difference in the lives of students and the world.

- Teachers are finding success designing deep learning experiences that develop students' capability in the deep learning competencies. The curriculum is the primary focus, and the 6Cs develop as a result of designing for deep learning.

- Using a broad mix of assessments and performance indicators (qualitative and quantitative) supports the measurement of deep learning.

- Designing deep learning experiences has been effective in the alignment of NPDL and curriculum, working with the Deep Learning Progressions to measure learner development of the 6Cs, and assessing student performance using a broad range of evidence, all of which have been identified across Clusters as developmental focuses.

DEEP LEARNING EXPERIENCE

STUDENTS AS ENGAGED NEIGHBORS, COMMUNITY MEMBERS, AND CITIZENS OF THE WORLD

Title: What Makes a Great Community?

Focus Competencies: Character, Citizenship, Collaboration, Communication, Creativity, Critical Thinking

Curriculum Areas Covered: Health, Humanities and Social Science, Language Learning, Literacy, Mathematics, Science

Student Ages: 6-8

Learning Activity Length: 5 weeks

Teacher description of the deep learning experience

"After viewing photos of a rural community in Zambia, students recorded their observations, thoughts, and questions. From their wonderings, a driving question emerged – 'What Makes a Great Community?'

Students explored and mapped their local community, learned about communities around the world, and paired up with a school in South Korea to share information about our respective communities. Community members visited as guest 'experts,' and our grade 4 learning partners helped with research.

As student questions drove the inquiry, the students decided they wanted to create their own dream communities. They were challenged to stretch their thinking by considering sustainability when planning their community. In small groups, students planned and designed their ideal communities.

Wishing to have some 'expert' input on their designs, students corresponded with a variety of community members to invite them to the classroom. The class held a 'Community Day' where community members (e.g., Mayor, City Planner, Social Planning Research Council member, Green Venture representative) met with each of the groups to offer feedback from their area of specialty."

Design and Implementation

- Curiosity and questioning are always supported as part of the classroom culture.
- Time was set aside for regular check-ins and reflections on collaboration skills.
- Students leveraged technology to learn about global communities with grade four partners.
- Students took photos of key community features during a community walk to use for information and reference.
- Digital tools were used to help access information and books about community helpers and sustainability.
- Student voice drove the learning (e.g., their desire to create dream communities).
- Flexible planning based on student interest in sustainability led to a relevant class outing, which in turn resulted in students wanting to learn more about bees.
- Real-life connections were made through community partnerships and authentic tasks. As students became aware of the many factors that go into city planning, they decided to contact and meet with community "experts" to receive their input. Students determined which experts they wanted to involve.
- Progress was communicated through regular conferencing with groups and individual students.
- Ongoing self-assessment and peer-assessment of their progress using a co-created tool.
- Parent involvement was encouraged (e.g., letter home to parents informing them of focus and asking for assistance; students interviewed their parents at home).
- Flexible groupings for collaboration (e.g., peer groups, grade four student partnerships, adult partnerships).

Assessment

- Knowledge building circles were used to assess students' current and prior knowledge, determine next steps, assess the application of what they learned, and develop student understanding of the 6Cs.
- The teacher and students co-created the success criteria for learning tasks such as map development, designing dream communities, and collaboration.
- Learning was captured through video, photos, and anecdotal comments.
- Growth of Citizenship, Collaboration, and Creativity were measured and assessed using the Deep Learning Progressions.

- Strengths and needs were assessed during knowledge building circles and conferences.
- Final dream communities were self-assessed, peer-assessed, and teacher-assessed using co-created success criteria.

The teacher self-assessed the learning experience using the New Pedagogies Learning Design Rubric, and provided pre- and post-experience ratings for six "marker" students on the Citizenship Deep Learning Progression. At the beginning of the learning experience, all marker students were rated at the *Limited* or *Emerging* levels of the progression. Of these students, all progressed in their development of the Citizenship competency, and five advanced multiple levels on the progression.

"In my community there's no litter and there's only electric cars."
   Student

"To have people in their community, people that have interest in community, come and actually help them plan their own great community, is like taking the walls down out of the classroom, and it really brought learning to life."
   Teacher

"We're all learning and that's what's wonderful about having community members contribute to the learning."
   Community Expert

Key Points of Learning:

- Students' learning led them to even deeper inquiries, which they were able to explore in a co-designed and self-directed manner. Throughout the experience, this freedom helped students' take their learning in creative and meaningful directions.
- Learning partnerships were cultivated from the very beginning with students' families, and expanded to include the wider community as students reflected on where they were and where they wanted to take their learning.
- The deep learning experience design supported assessment with the New Pedagogies Learning Design Rubric and Deep Learning Progressions, and students' development of key focus competencies was measured and clearly described.

Learning Environments

The new pedagogies mark a significant shift from traditional models for teaching and learning that confine learning to the classroom and place the teacher as director of all learning and assessment. In NPDL, students are more directly involved in the design and assessment of their learning (self-directed learning), and they have stronger voice and choice in what and how they learn. The planning around deep learning has afforded more students agency over their learning. Teachers are becoming activators of learning, and they, too, are given more freedom to be creative within a less prescriptive environment. Learning is shown to be deepest when students and teachers have the freedom to design and run with their ideas, and when trusting relationships are at the core of the learning process.

"Criteria were co-constructed for each of the [deep learning experiences] in an organic manner reflecting students' emerging and ongoing understanding of the task."
   Teacher

I hear a lot of 'I didn't know my students could do this' or 'I didn't know my child could do that.' [With NPDL] students get to be smart and good in different ways and traditional school doesn't always provide them with those opportunities. NPDL gives all kids the chance to be amazing and show the gifts they bring. The way we view our students is changing along with the opportunities we give them to be great.

Cluster Leader

Clusters have indicated that deep learning is most effective in those instances in which students have been given the agency to co-design both the learning task and success criteria, and can pursue learning that interests them as individuals. Teachers' Deep Learning Exemplars provide solid evidence in support of this claim. The deep learning experiences that describe the richest examples of deep learning involve topics that students are truly passionate about, and this passion stems from the fact that the outcomes of the task improve the lives of the learners, their families, and/or members of the community. When students are allowed to take ownership of their learning, they demonstrate and develop their gifts and competencies in ways previously unavailable to them.

"All the ideas came from the students and that is how they committed to the process."
   Teacher

Turning Texts into Action

"Students were asked to develop an action project based on themes and provocations from books they had chosen to read... [They] identified how their new knowledge relates to them and how they can use it to action change in their own lives [and] within their own community."

The deep learning experience was designed to support students to:
- Develop as autonomous learners
- Delve deeper into content
- Demonstrate their level of understanding through a learning experience that is meaningful to their lives
- See themselves as "agents of change" in their own lives and communities

"I realized that every day is a new chance to change."
> ***Student***

"Students were more engaged and made genuine connections to their own lives and to the texts and provocations we explored earlier in the year."
> ***Teacher***

"My son does not stop learning when he gets home."
> ***Parent***

Teachers indicate the strongest evidence of deep learning in learning experiences that are self- or co-designed, self-directed, and meaningful to the lives and interests of the individual learners.

Deep learning is also taking students outside the classroom, where their learning is developed and strengthened in the formation of learning partnerships and enabled to occur at all times, both during and outside of formal schooling hours. As a result, learners are beginning to experience that "seamless 'ecology' of life and learning," in which "learning, doing, knowing, adapting, inventing and living become practically indistinguishable."[5] Students are bringing their learning home to their parents and out into their communities, impassioned by meaningful learning topics and empowered by the opportunity to choose and pursue them as they desire.

"My child brought the learning home regarding looking after our planet and reducing our carbon footprint. I've been told I'm not allowed to buy a new phone this year!"
> ***Parent***

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5. Fullan & Scott (2014). Education PLUS. 3.

Teachers note that students are displaying competencies developed in one curriculum area when working on tasks in another, and, in some cases, are even using the language from the Learning Progressions when solving complex problems and tasks. Students want to take their learning as deep as possible, and often pursue learning areas beyond those initially identified as important for the task. When given the freedom to take their learning in the direction they see fit, learners begin to make links between curriculum areas and create products that demonstrate a breadth of learning that may not have been required or expected given the original experience design. Flexible learning design – design that is constantly changing to adapt to further identified learning areas and needs – is allowing students to take control of their learning in powerful, perspective-altering ways.

FERTILE GROUND

Developing a Culture of "YES!"

"[Deep learning] is certainly one of the only things I've seen this kind of excitement around in my career, but you can't have it work in a culture of 'no.' You better be ready to say a lot of 'yes' and not a lot of 'no' when teachers come with ideas for what they want to try."
    Cluster Leader

Deep learning can only thrive and make a difference for learners and the world when operating in a culture of learning, innovation, reflection, and "YES!"

Baseline School Conditions ratings demonstrate that of all the school conditions dimensions, *Creating a Culture of Learning* is currently the most developed throughout NPDL, as only 4% of schools were rated at the *Limited* level and 37% were rated as *Accelerating* or *Advanced*. While most have identified room for further growth, Clusters and schools are already experiencing success in developing the conditions that allow participants to believe they can take risks and learn *with* their students in order to further improve outcomes for all.
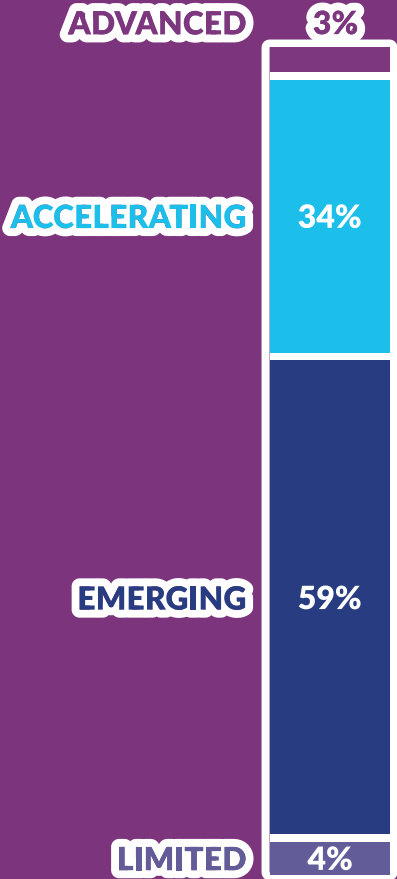
ADVANCED 3%

ACCELERATING 34%

EMERGING 59%

LIMITED 4%

*Creating a Culture of Learning
(155)*

Deep learning has changed the way teachers and leaders understand their role within the system. They are no longer merely "educators," but now more fully realize their responsibility as constant "co-learners" alongside their students. Deep learning is only possible within cultures where students, teachers, and leaders – all learners – are committed to the process of learning and reflection, and to saying "yes" to risks, trying new approaches, and, sometimes, failing.

As educators, [we] felt we pushed ourselves out of our comfort zone in the areas of technology use as well as student inquiry and collaboration.

Teachers

Reflecting on successes and opportunities for growth is an essential step in the deep learning process, ensuring that participants are learning from every element of the process and changing their approach or behaviors as necessary. All learners, at every level of the system, are gaining valuable insights through the process of reflecting on their learning, both at the end of a given experience and in real-time throughout the learning journey. Cultures of collaborative inquiry and reflection are shifting the focus from specific content areas to the students, and leading participants to reflect on how every action or idea impacts learners' deep learning development.

Reflections from an NPDL school

"Our classroom culture is built on the foundation that we are constantly learning, asking questions and deepening our understanding."
        Teacher

"Sometimes the beautiful 'oopses' can be the best!"
        Student

"As a classroom community, we continually meet to reflect on our learning journey and make decisions about what our next step will be on our learning journey (are we researching something new, reaching out to a global audience, or do we need to think about and reflect on different aspects of our wonders)."
        Teacher

- Deep Learning Exemplars demonstrate that when given ownership of their learning, students develop and reveal their capabilities in ways previously unavailable to them, and gravitate toward learning that has a positive impact on their own and others' lives.

- Deep learning facilitates knowledge and competency development anytime and anywhere, as students' learning is led beyond classroom walls where it is further cultivated by their families and members of the community.

- Flexible learning design expands students' opportunities to be great by allowing them to control the direction of their learning and explore powerful, perspective-altering paths.

- Cultures of learning, innovation, and reflection empower all their members to take risks, reflect on and learn from successes and challenges, and contemplate every action and decision in light of the impact it will have on learning outcomes.

DEEP LEARNING EXPERIENCE

STUDENT-DIRECTED LEARNING

Title: Global Communities Inquiry

Focus Competencies: Collaboration, Critical Thinking

Curriculum Areas Covered: Digital Technologies, Humanities and Social Science, Language Learning, Literacy, Technology

Student Ages: 6-8

Learning Activity Length: 2 months

"We understand now that it is difficult to know in advance where students will take the inquiry. It is important to let them pursue the answers to the questions that they find most compelling."
        Teacher

Students were planning to research one of the countries of the world, but in the process they realized they didn't know enough about their own city, so they decided to learn about their city *and* the world around them. Students co-created the success criteria, brainstormed the skills they acquired, and reflected on the varying ways they were able to share their learning.

Unanticipated Impact

- Growth Mindset – Students were willing to take risks and they accepted misconceptions as an opportunity for deeper learning, rather than a reason to give up.
- Confidence – Students developed oral language and presentation skills. They participated actively in interviews with the mayor and a local reporter. Students also prepared presentations to explain the inquiry process to school parents, the Superintendent, and visitors from another NPDL Cluster.
- Digital Fluency – Students blogged independently and taught others. They were able to explain how to use Google My Maps to their teachers. Throughout the inquiry they used Padlet, QR Code Readers, FaceTime, iMovie, Google Drive, and Google Hangout.

- Initiative – Students have taken initiative to further pursue their interests from the inquiry. They continue to use the digital tools to which they were introduced throughout the inquiry process to show learning in new and innovative ways.
- Social Issues – Students began to develop an interest in social issues beyond the classroom. They learned about and expressed concern about literacy rates and access to clean water in other parts of the world, and developed a deeper understanding of different cultures and societies. In learning about other cultures, they began to develop an appreciation of their own personal situations.

"We were always amazed at the students' capabilities. We saw such growth and confidence develop. They were proud and passionate about not only their product, but the process. They were excited to share their new learning with anyone who would listen. I frequently caught them in the hallway, on the school yard and at lunchtime, talking, planning, plotting about their inquiry. They were asking me questions and I didn't have answers – and that was ok. They were trying things with technology that I didn't know how to do – and that was ok, too! I was learning from them."
    Teacher

Key Points of Learning

- If the inquiry process leads learning in a direction other than what was initially intended, run with it!
- Be mindful of unanticipated impacts of the learning experiences that develop as the learning expands through new and unexpected avenues.
- All students, educators, families, and members of the community are learners, and learning new things with and from students allows for powerful deep learning partnerships.

Leveraging Digital

The fourth element of the new pedagogies encapsulates a major area of focus regarding the design and effectiveness of NPDL as a whole. Use of technology in education has demonstrated time and time again that technology alone is not the answer – it is not the driver of deep learning outcomes. Those instances and examples that best demonstrate deep learning in action and in outcome embrace technology as an *enabler* of learning outcomes, whereas the new pedagogies, powered by teachers and accelerated by technology, are the true drivers of deep teaching and learning.

FERTILE GROUND

New Pedagogies are the Driver of Deep Learning – Digital is an Enabler

NPDL Cluster leaders have emphasized that before NPDL, educators were excited about technology but in a position of not knowing how to fit it in with curriculum, nor how it would change the teaching and learning process. Countries or regions that had implemented programs such as Bring Your Own Device (BYOD) and 1:1 devices were thrilled to have the technology, but the potential for technology to truly make a difference for learners was widely unrealized. Whereas there was once the feeling that they were "just using technology for the sake of technology," NPDL Clusters have witnessed a marked change in the way technology is being integrated and employed for learning. Specific areas of improvement identified by participants include technology's impact on enabling collaboration, offering opportunities for a more differentiated and personalized curriculum, improving access to resources and experts, offering authentic learning contexts, and improving formative assessment.

"Through leveraging digital we were able to make this learning available anytime and anywhere. The result has meant that many students have done further learning at home, and engaged their families in discussions and research that has then had a positive impact on the learning of others the next day."
Teacher

In describing the design and implementation of deep learning experiences, teachers consistently refer to the process of leveraging digital as integral to several phases of the experience cycle. Leveraging digital is highlighted as a component of the experience in almost every deep learning experience submitted. Teachers are not only leveraging digital, but using the language of effective technology use to describe how it is being used and the impact it is having. In several cases, the technology used to enable a deep learning experience has proved so fun and engaging that students have requested the technology be incorporated into everyday life at school. Technology is contributing to new learning partnerships at all levels of the system, and helping learners take their learning outside the classroom walls. NPDL very intentionally and explicitly emphasized the importance of leveraging digital (each of the six Deep Learning Progressions has a leveraging digital dimension), and this emphasis has been reflected and fully embraced throughout the Clusters.

NPDL has established technology's role as an enabler and accelerator, rather than driver, of deep learning outcomes. While the effect of this mind-shift is already felt and described throughout all of NPDL, its impact will be more fully realized once a broader set of Exemplars have been submitted, moderated, and shared with teachers across the initiative. In addition, NPDL is working to expand its *Deep Challenge Series*, which involves wide implementation of globally designed deep learning experiences and the sharing of learning outcomes online. The descriptions provided by the most impactful deep learning experiences will serve to strengthen all teachers' work in the new pedagogies and toward deep learning outcomes.

NPDL Deep Learning Exemplar Moderation

"The moderation process around deep learning activities was a turning point for some, who learned through the process how the tools fit together."
   Cluster Leader

NPDL's Exemplar moderation process supports collective determination of the deep learning experiences that provide the richest description of deep learning in action and in outcome, and at all phases of the Collaborative Inquiry Cycle. Moderation occurs at three levels:

School
After teachers have shared their Deep Learning Exemplars with one another, participants engage in professional moderation to discuss which deep learning experiences best demonstrate and describe deep learning.

Cluster
Once schools have selected their deepest examples and shared them with their Cluster team, Cluster leaders and other participants engage in a similar moderation process to select the richest examples of deep learning experienced in their Cluster.

These Exemplars are then submitted for moderation by all Cluster and global team leaders. Global moderation consists of a multi-week process in which groups of Cluster leaders engage in discussion around the new pedagogies, deep learning, and their descriptions as evident through deep learning experiences. The process results in the selection and sharing of globally moderated Exemplars throughout NPDL and to the wider education community.

Engagement in Exemplar submission and moderation has been of varying focus throughout the Clusters, reflecting the early global focus on first understanding and working with NPDL tools and processes before designing and sharing examples of deep learning experiences. However, the Exemplars submitted thus far (several of which are described in part throughout this report) already demonstrate highly effective use of the NPDL tools, leveraging of digital technologies, teaching steeped in the new pedagogies, and deep learning outcomes for students.

These Exemplars provided the opportunity for NPDL's first global moderation process, which engaged some 20 participants from all NPDL Clusters in vibrant discussions of the level of deep learning currently described globally. Results were consistent with that level described by New Measures ratings and participant observations: deep learning is thriving in the right conditions, and widely emerging on a global scale.

The level of learning experienced by moderation participants was profound. It shed light on the importance of the moderation process for assessing inter-rater reliability, as well as its impact on learning at all levels of the initiative. Globally, it revealed the need for a higher level of emphasis on deep learning experience moderation, so as to provide participants with the most powerful examples of deep learning for their own continued growth and development. Additional guidance surrounding the process for describing and moderating deep learning experiences will be a primary focus.

In the coming years, NPDL hopes to expand the moderation process to engage a wider range of teachers and schools globally. Exposure to Exemplars will go a long way in providing powerful examples for teachers now, and in more widely engaging schools in the process of Exemplar moderation in the future.

NPDL will be publishing a full report containing detailed examples of moderated deep learning experiences, key findings from the first round of moderation, and opportunities for refining and expanding the moderation process for future iterations.

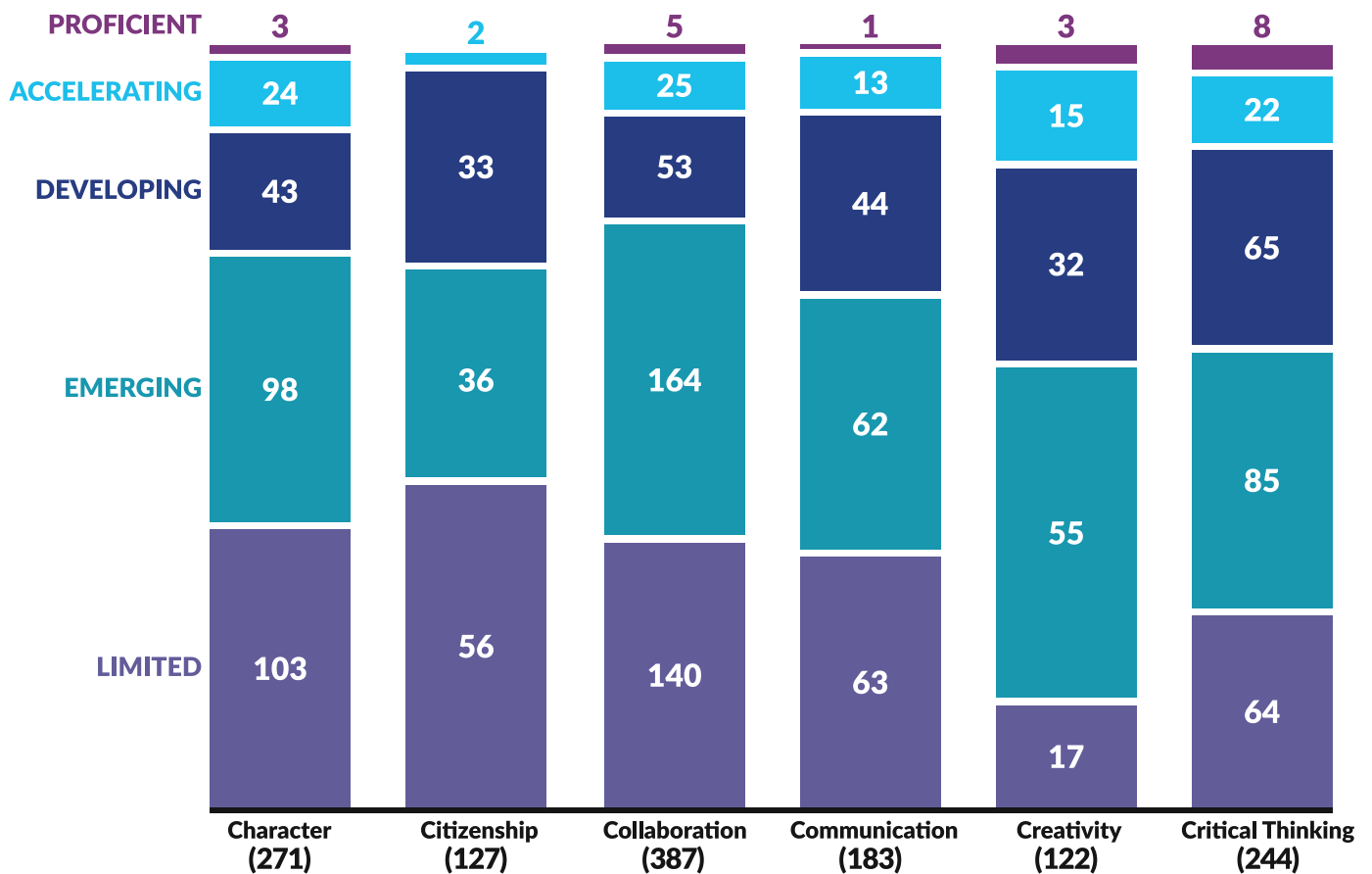## Progression Ratings – Leveraging Digital

	Character (271)	Citizenship (127)	Collaboration (387)	Communication (183)	Creativity (122)	Critical Thinking (244)
PROFICIENT	3	2	5	1	3	8
ACCELERATING	24		25	13	15	22
DEVELOPING	43	33	53	44	32	65
EMERGING	98	36	164	62	55	85
LIMITED	103	56	140	63	17	64

Figure 6: Progression ratings on *Leveraging Digital* compared across each of the 6Cs.

Given its importance in accelerating the new pedagogies and helping teachers and students bring deep learning to life, *Leveraging Digital* is included as a dimension of all six Deep Learning Progressions. Progression ratings on the *Leveraging Digital* dimension are compared across each of the 6Cs above.

School Conditions ratings demonstrate a gap in effective leveraging of digital technologies, as more schools indicated *Advanced* evidence of this dimension than any other (7%), yet 19% of school leaders rated their level of development as *Limited*. Schools are already finding success in leveraging digital technologies within the curriculum to develop the 6Cs, and have begun to share their successes through teachers' submission of Deep Learning Exemplars. Wider sharing of these experiences will contribute to improved digital leveraging on a global scale.
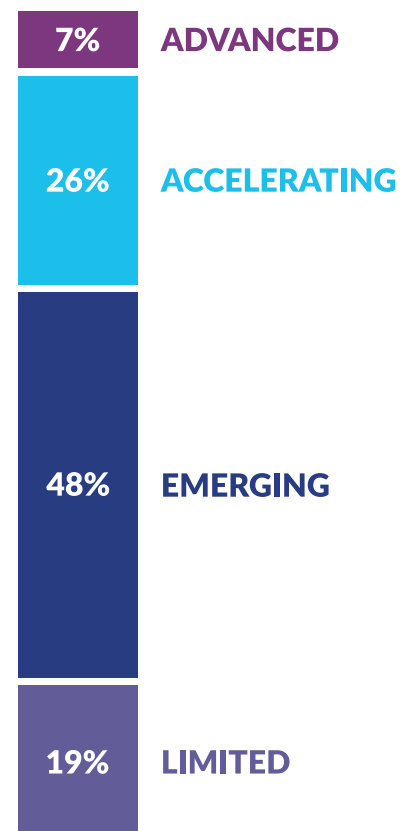
7%	ADVANCED
26%	ACCELERATING
48%	EMERGING
19%	LIMITED

Figure 7: School Conditions ratings on the *Leveraging Digital* dimension.

Leveraging Digital (156)

LEVERAGING DIGITAL SHOWCASE

"One high school started working through videoconferences with a primary school, and now they have a project that involves three or four different school centers, and they all work through videoconferences. The whole classroom is communicating with other schools they wouldn't have been able to work with without the videoconferences. Last year there were two schools working together and now they've made the project stronger and included other schools; they're teaching each other. The teachers enable the communication, but the high school students are teaching the primary school students."

"A middle school invited us to an open day for parents and the community… [at which] each group of students presented their project and explained the competencies the project was promoting. They opened the activity with a short play where teachers were playing the role of students and students were playing the role of teachers. They did a scene on the traditional method, dated 1985, and [then] an NPDL school in 2016. In 2016 all the…devices appeared and children were working in teams. This is a case of a big change very much related to NPDL."
Cluster Leader

Key Findings: Leveraging Digital

- Technology is an *enabler* of deep learning – teaching in the new pedagogies is the true *driver* of deep learning outcomes for all learners. Focus is best placed not on the technologies themselves, but rather on how they can be leveraged to deepen learning experiences.

- Effective leveraging of digital technologies enhances all other elements of new pedagogies learning design: it facilitates deep learning partnerships with students and community experts regardless of geographical location; enables a wealth of opportunities for learning design and implementation; and supports students' capacity to take control of their learning both within and outside classroom walls.

- Participants are seeking examples of effective leveraging of digital technologies, which will be made widely available through the processes of designing deep learning experiences and moderating Exemplars. Given its impact on learning at all levels of the initiative, Exemplar moderation will be a primary focus for NPDL moving forward.

DEEP LEARNING EXPERIENCE

LEVERAGING DIGITAL ACROSS CURRICULUM FOCUSES

Title: Europe

Focus Competencies: Character, Collaboration, Communication

Curriculum Areas Covered: Arts, Digital Technologies, Geography, Language Learning, Literacy, Science

Student Ages: 12-14

Learning Activity Length: 5-6 weeks

This deep learning experience was designed to engage students in an extended learning opportunity that involved leveraging digital for knowledge and competency development across all curriculum focuses.

"The tasks in this project stretched from one curriculum topic to another uninterruptedly."

ICT and Art

Students filmed and edited an interview of a fellow student, performed a visual presentation using PowerPoint, and sketched a "character" from their country using OneNote. The characters supported students in the process of adopting the perspective of a citizen from another country and working to understand their worldviews.

"The freedom to choose between, for example, more or less artistic approaches, allowed the students to use their particular strengths to show their learning."

Literacy

Students gave oral presentations on their research, wrote collaboratively using OneNote, and wrote a script for their interviews, collectively determining questions that would contribute to others' learning about each country.

Language Learning

Interview scripts and videos, along with the students' character videos, were created using a language other than the students' primary language.

"Creating characters...provided good practice for [language] structures, vocabulary and pronunciation, since the students wanted to rehearse and film the character over and over again."

Geography

Internet searches allowed students to research their country, and the PowerPoint presentations provided fellow learners with the opportunity to explore countries and cultures other than those they focused on themselves.

"During the process we also got...chances to talk about reliable sources of information and how to evaluate them."

Key Points of Learning:

- Leveraging of digital technologies provides opportunities for seamless cross-curricular learning that facilitates collaborative learning among both students and teachers.
- Digital technologies are most effective when leveraged not simply for the sake of using technology, but rather directed toward the development of deep learning competencies.

"

"Collective capacity building involves the increased ability of educators at all levels of the system to make the instructional changes required to raise the bar and close the gap for all students."

Coherence[1]

NPDL supports Cluster Leads and their leadership teams to build the knowledge, skills and competencies needed to transform learning in their Clusters. Cluster leadership in turn supports and influences school and education system leaders to create the conditions necessary for deep learning, and to build the capacity of teachers to shift teaching and learning practices toward the new pedagogies.

The capacity building and implementation processes are adaptive, providing space for each Cluster and school to use the Suite of Tools to first determine what is important for them and then lead the necessary change. This model has required a change in thinking and practice in all Clusters, as participants in the past have been exposed predominantly to step-by-step implementation processes affording limited room for adaptability and contextualization.

"There's a sense of realness about the change with NPDL that's not about an imposed model or methodology. The methodology here is adaptable and interpretable whereas a lot of the change management stuff we've seen is really rigid."
Cluster Leader

Participants have acknowledged the benefits of determining their own entry points for deep learning implementation while also emphasizing the amount of capacity building support required in leading sustainable change within this implementation model. The resources and tools provided by NPDL provide the framework for work with deep learning and in the new pedagogies. The capacity building required in addition to these tools was more than participants initially anticipated, and reflects the level of change necessary for implementing deep learning. In some cases, participants experienced challenges selecting an entry point – the vehicle for lifting deep learning off the ground. Others have required additional support to sustain the momentum achieved in the beginning stages.

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1. Fullan, M., and Quinn, J. (2016). Coherence: The Right Drivers in Action for Schools, Districts, and Systems, 57.

Points of Entry

The emergence of three, mutually inclusive points of entry speak to participants' success raising deep learning off the ground in varying contexts.

Deep Learning Conditions

Clusters that experienced lesser alignment between system conditions and those consistent with deep learning, or that looked to identify and address areas most in need of growth for successful implementation, adopted deep learning conditions as the primary initial focus. While this focus is essential for supporting deep learning, excitement around this work reaches new levels when teachers engage with the 6Cs, design deep learning experiences, and experience themselves the power of deep learning in action. Understandably, deep learning has taken longer to get off the ground in Clusters that felt the need to first emphasize changes to conditions. Establishing these foundations will help deep learning take firmer hold when it's ready for adoption at scale.

Deep Learning Progressions – 6Cs

Excitement around the deep learning competencies and what they mean for teaching and learning has positioned the 6Cs as an effective entry point to drive teacher engagement. Working closely with the Deep Learning Progressions provides an understanding of competency success for teachers, who in turn plan for deep learning at the classroom level. Teachers who have embraced the focus on the 6Cs have had success establishing cultures of innovation, reflection, creativity, and constant learning for their classes. Designing deep learning experiences is the natural next step upon developing understanding of the Progressions, as teachers look to translate their own learning into deep learning outcomes for students.

Designing Deep Learning

In many ways, deep learning design marks the combination of established deep learning conditions and fluency in the 6Cs. It requires a culture of learning, where educators are given freedom for implementation and are willing to share their learning with others, as well as deep knowledge of what learning looks like for focus competencies at every level of the Progressions. Beginning from a point of deep learning design means schools are both willing and able to support deep learning. It also includes work with the Deep Learning Progressions, but here necessitates capability with additional tools as well, such as the New Pedagogies Learning Design Rubric and Learning Design Protocol. For this reason, entry into this stage of the NPDL process has been a major turning point for participants, who see clearer than ever before how all the pieces of the framework come together toward the design of meaningful learning that drives student success.

The absence of a step-by-step process for implementation was not only intended, but fundamentally required at the inception of the NPDL deep learning journey. The fact that best practices and approaches were altogether unknown necessitated an exploratory partnership design reliant on participants' willingness to create, learn from their approach, and share that learning within and across Clusters. NPDL capacity design was intentional in using the collaborative inquiry process as a foundation and also providing a set of design tools to serve as a catalyst for professional dialogue and discovery of the new pedagogies. NPDL continues to depend on all participants' capacity to learn together to identify and define the factors crucial to deep learning success.

Global Design

NPDL's global design is intended to connect educators through a common focus on deep learning, facilitating the broad sharing of ideas and cultivating a level of collective cognition only possible on a global scale. Clusters have identified several areas in which this vision has been realized, along with specific challenges related to the nature of this global initiative.

Teachers and school and Cluster leaders have found success in the realization that they are not operating in isolation, but rather as a part of a global partnership of educators using the same tools and processes to improve learning outcomes for students. Completing phases of the work and then seeing examples of others using the same approach has gone a long way to validate participants' own work with deep learning.

[The global design is] significant because [participants] recognize the importance of being global citizens, which can be tough in classrooms, very local, but to see that it's happening globally gives teachers the feeling that it's not just them – it's teachers everywhere who are all wanting to achieve deep learning.

Cluster Leader

NPDL's Deep Learning Labs have also proved important, as Cluster members value the opportunity to meet in person to support and learn from one another and discuss what's working well and what's not in terms of implementation. Clusters have been able to adopt and tailor materials created by other Clusters for use in their own, providing them with materials they would not have had the resources to create themselves.

The global aspect of NPDL has provided members working at every level of the initiative with support from others in the same position. Teachers and School leaders have had opportunities to learn from one another both locally and globally, and Cluster leaders are able to share their experiences with people leading Clusters in other parts of the world.

Although these opportunities are available and making a major difference in patches across the initiative, Clusters have also identified areas in which they would like to see the opportunities for global connection strengthened or expanded. Teachers know they are part of a global partnership, but many have expressed the feeling that the network of teachers could be stronger and more connected given its size and teachers' desire to connect internationally. Similarly, the opportunities for Cluster and school leaders to connect in person are limited, and Clusters that do not have the resources or opportunity to send members to NPDL events do not get to share in the live, capacity building experience. Several participants have visited and toured schools in other Clusters, but the majority of teachers and leaders do not have the opportunity to witness NPDL implementation and practice in person, outside their own local sphere. One of NPDL's primary focuses moving forward will be to better utilize its global network and help facilitate consistent and convenient connection on a local and global scale.

NPDL encourages each Cluster to move at its own pace, allowing them to focus on specific aspects of implementation depending on need. This has ensured that Clusters are not rushed along in the process of implementing deep learning. One challenge of this model involves varying positions on the implementation journey. The Clusters that have been in a position to lead the work have been more than willing to share their learning and materials, but have not had the same opportunities to learn from others at each point in the development process. Furthering opportunities for connection will benefit participants in this aspect of the initiative as well, providing means for sharing learning and resources in ways that have a greater impact on a greater number globally.

The *Deep Learning Hub* is a collaborative learning and data collection platform designed to support NPDL Clusters and Associate Networks in their deep learning journey. It provides access to a range of tools and features geared toward capacity building, collective innovation, and the development of deep learning conditions and outcomes at all levels of the education system. The Hub also facilitates New Measures data submission.

Despite offering certain opportunities for members to connect and share, the Hub has not yet delivered on its potential for bringing members together in truly meaningful ways. Whether in order to connect teachers and other leaders around shared interests and roles, or to facilitate teacher collaboration on global projects and other opportunities, it's essential that the Hub provides NPDL participants with ready and easy access to one another. One of NPDL's greatest strengths is its global community of educators using the same tools and processes to bring deep learning to life in areas throughout the world. The collective learning and knowledge generated through regular participant connection has the power to raise the initiative to new levels of progress and innovation. A social media strategy, a global deep learning experience protocol, expanded capacity building resources, and regional facilitators added in recent months show promise in connecting teachers more effectively. The Hub offers the potential to further facilitate this growth, and NPDL will look to expand the Hub's capacity for connecting participants around deep learning.

LEVERAGING LEARNING

Building and Sustaining Capacity

The absence of a step-by-step model for implementation, coupled with the exploratory nature of all work with deep learning and in the new pedagogies, require that participants build the capacity to implement deep learning in their local context. While NPDL tools

provide the framework, processes, and measures for working with deep learning, participants still need to develop the capacity to use the tools effectively.

On the *Capacity Building* dimension of the School Conditions for Deep Learning Rubric, 60% of school leaders rated their schools' level of development as *Emerging*.

Participant Tips for Navigating the Challenge

- Visiting participants in varying stages of their work with NPDL, connecting virtually with other teachers and school or Cluster leaders, and attending Deep Learning Labs and other NPDL events have all proved beneficial in developing capacity.
- Engage with the capacity building tools available on the Deep Learning Hub, along with the Hub's tools for connection and discussion.
- Implement professional learning supports that focus on areas of need as identified through work with NPDL tools.

ADVANCED · 4%

ACCELERATING · 28%

EMERGING · 60%

LIMITED · 8%

Capacity Building (155)
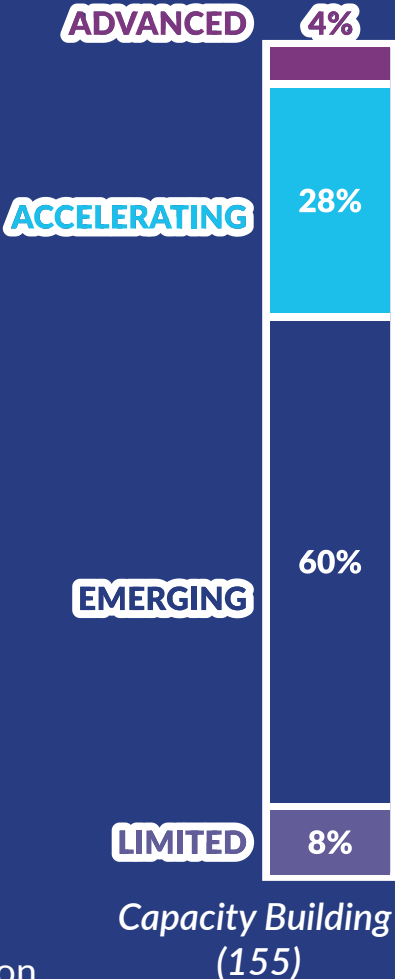
Before NPDL, there were no examples of clusters of schools in countries throughout the world using the same tools to design, implement, and measure deep learning. Work with NPDL thus far has demonstrated that global deep learning implementation is not only possible, but making a significant difference for learners and educators regardless of their education system. The success of NPDL's global implementation speaks directly to the interpretability and adaptability of NPDL tools and processes. Participants are successfully implementing the framework within *and to meet* a strikingly broad range of system and curriculum expectations. The evidence collected throughout the NPDL journey has proven the viability of a global framework for deep learning, which will continue to strengthen as participant experiences further inform initiative design and direction.

Leading Deep Change

Tied to the process of building capacity, participants have voiced challenges associated with leading the change at the Cluster, school, and intermediate levels. Whether it's Cluster leaders supporting

school leaders or school leaders working with teachers, each have spent time working through the process of how to effectively support the NPDL work happening throughout their respective Cluster or school. Even in Clusters that indicated a strong sense of leadership, participants faced challenges in effectively overlaying the NPDL framework on top of models that preceded the introduction of NPDL. NPDL places heavy emphasis on leadership "from the middle," which identifies the capacity of districts or clusters of schools to play a major role in shaping implementation and achieving coherence across a system.[2] School leaders need to be empowered to continue to lead effectively as before, while also given cohesion on how NPDL fits into and enhances what's already in place. Cluster leaders have expressed the importance of providing the necessary capacity building and implementation support while also allowing school leaders the freedom to run with NPDL in a way that works for them.

At the school level, participants have noted the varying degrees to which school leaders have taken up and engaged with NPDL tools and processes. For some, the main challenge consists in finding the alignment between what they have to do within their school or the wider system and the processes that have been introduced through NPDL. Deep learning has required additional work from all participants, who in turn require the necessary support to work through challenges such as working with the tools, linking NPDL and curriculum, and leading deep change.

Levels of participation and engagement vary among teachers as well. Cases have demonstrated that teacher engagement is in large part reflective of the engagement of their schools' leaders. School leaders who truly engage with the process have often been able to encourage teachers to do the same, finding opportunities to meet and dedicate significant amounts of time to working through the new tools and processes.

FERTILE GROUND

Leading for Deep Learning

Across NPDL, Cluster leaders have expressed the importance of leadership teams that wholly engage with NPDL processes and pave the way for others to do the same. NPDL challenges participants at all levels to develop an understanding of its tools and processes and work hard to implement them at the Cluster, school, or classroom

2. Fullan & Quinn (2016). Coherence.

level. Leaders that have embraced the adaptability of NPDL and collaborated with other teachers and leaders to design the implementation process have achieved success in shifting the culture of their school or schools.

As evidenced by their Conditions ratings, schools' ability to lead deep change is still widely emerging throughout the Clusters. The following case describes the effect of NPDL in one Cluster, referred to here as Cluster A, whose school leadership committed to the collaborative process to lead change both in their own schools and others.

Leading Collaboratively for Change

Cluster A highlighted an enormous shift in sharing and collaboration at all levels of the Cluster as a direct result of leaders' engagement with NPDL.

Before NPDL, the schools now involved in the initiative were less collaborative and widely hesitant to share learning outside their own school. Since embracing a common focus on NPDL and its emphasis on collaboration and collective cognition, School Leads and lead teachers have begun to work together at levels previously unseen, and in ways they had never thought of before. Leads developed shared strategic plan documents aligned to NPDL, and are also sharing other resources and learning between schools.

The collaboration is working at two levels: 1) Within each school, principals and teachers are empowered and collaborating around improving learning for each of their students, and 2) collaboration is also happening between schools through a shared commitment to improving learning outcomes not only for their own students, but for *all students within and outside members' schools*.

Cluster A experienced high levels of participation and engagement because of the level of commitment from principals. As a group, they engaged with and owned the process from the very beginning. This level of active principal engagement was noted as the "ticket to [their] success." Principals were not simply getting on board out of

ADVANCED	3%
ACCELERATING	16%
EMERGING	56%
LIMITED	26%

Leading Deep Change (156)
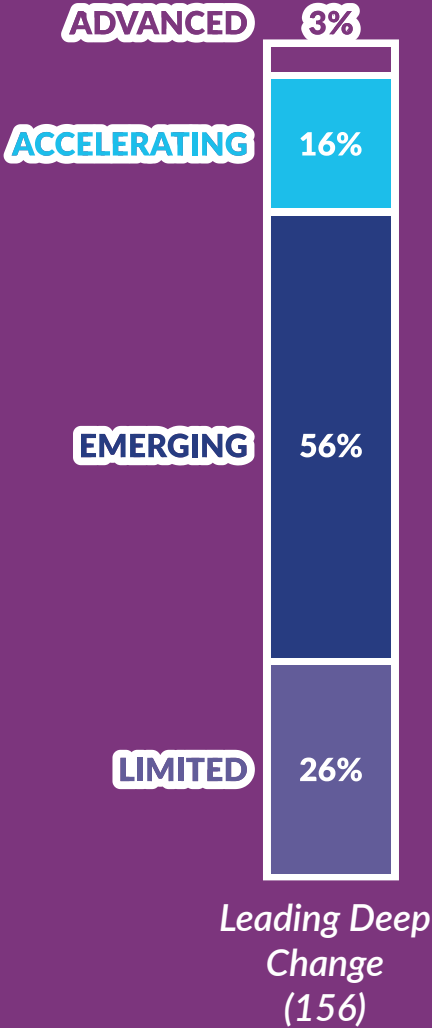
obligation, but rather a true desire to be involved with NPDL and use the tools and processes to make a difference for learners. The opportunity to come together in shared commitment to NPDL provided a vehicle for change that shifted the schools' culture away from competitiveness and toward collaborative learning.

In one of the Cluster's schools, a new deputy principal was appointed a year after the Cluster had begun work with NPDL. He fully engaged with NPDL, reading everything relating to the global partnership and talking to the school's principal to learn all he could. He was responsible for sorting out the curriculum plan, and crafted the entire plan to align the curriculum with NPDL. The deputy principal presented the plan during one of the Cluster's meetings, and was more than willing to share it with the other school leaders to help them create something similar in their own school.

"Everyone around the table wanted [the curriculum plan] and asked if they could have it, and he said 'Of course – that's what this is about; it's about sharing.'"
      Cluster Leader

One of the principals commented on how the schools used to compete with one another, but now all they think about is what's best for all students, both in their own school and others. Fully embracing and engaging with NPDL has strengthened collaboration at all levels of the Cluster, transforming the culture to foster collaborative schools open to sharing their own successes and embracing the successes of others.

In every Cluster, having leaders who truly engage with NPDL has been crucial to building capacity and implementing deep learning in a way that makes it stick. Clusters need educators who are willing to first try new approaches, and then stand in front of other Cluster members and walk through what they tried, what worked, and what didn't. Go-getters capable of leading the change and sharing their successes and failures with others have helped spread best practices and strengthen the presence of deep learning in their Clusters.

System Change

It's important to emphasize that educators are working within a system, and that system conditions determine to a considerable extent the capacity educators have for leading change. If educators are not given the space to take risks and try new approaches, they will have a more difficult time embedding deep learning into their daily practice. For this reason, NPDL places a heavy focus on measuring and developing the conditions that allow deep learning to be most effective.

One of the most prominent systemic challenges experienced by Clusters is finding the balance between fitting NPDL tools within existing system expectations and taking action to drive systemic change. To this point, Clusters' focus has remained more on aligning NPDL with the wider system than on system change geared around deep learning. The general feeling is that deep learning won't work unless Clusters firmly establish system alignment, which has resulted in bringing NPDL to the system in order to get it off the ground within Clusters' schools. Those Clusters that indicated a lesser alignment between their education system and NPDL emphasized the importance of taking the time to understand how deep learning fits into and enhances what's already in place. Clusters and schools that have struck the balance in aligning NPDL with system demands have required strong school leadership that has organized sufficient time to meet and plan for deep learning.

Currently, NPDL has been implemented in groups of schools or districts operating within a wider education system, as opposed to implementation at the whole-system level. Two NPDL Clusters are currently in the process of moving toward whole-system implementation, which would mark the first examples of whole systems attempting to go to scale with deep learning. Regular schools working within education systems to change the culture of their district or regions of schools are already finding success with deep learning. Its impact will only be strengthened as system conditions adapt alongside those of its schools to further enable deep learning outcomes for all.

LEVERAGING LEARNING

System Change

"There's going to be a change needed in any system that's having NPDL introduced."
     Cluster Leader

Cluster members have commented on the need for improving conditions to enable participants to explore new approaches, lead deep change, and work effectively with NPDL tools and processes. School Conditions ratings reflect leaders' measurement of this need, as do Cluster leaders' assessments of the current conditions shaping Cluster and system capacities for deep learning.

Participants are already making a difference for their learners through successful implementation at the school and Cluster levels. The next step will be moving deeper

into the system, identifying the conditions that are and are not supporting deep learning and leading change in those areas that will strengthen the system as a whole.

Participant Tips for Navigating the Challenge

- Use the School Conditions for Deep Learning Rubric to identify strengths and areas for improvement, and then work with the other Conditions Rubrics to identify the system- or Cluster-level shifts that will further enable school improvement.
- When aligning NPDL within system expectations, focus on how system conditions can change to improve deep learning outcomes, and on opportunities to lead this change from the school or Cluster level.

Key Findings: Capacity Building

- The adaptability and interpretability of NPDL's tools provide a level of freedom that hasn't been experienced by the majority of participants and schools. Participants are embracing this freedom, and require significant capacity building support in order to thrive in this new model for teaching and learning.

- As entry points for work with deep learning, Clusters have found success beginning with deep learning conditions, the Deep Learning Progressions (6Cs), and/or deep learning design, depending on identified needs.

- Opportunities to connect with other participants globally have been essential to participants' success in their own Clusters, and is also an area NPDL needs to expand to increase the capacity for knowledge building and the sharing of learning.

- Leaders that have committed to working with NPDL tools and processes and finding necessary alignment have been able to support teachers and other participants to find the level of engagement that facilitates deep learning outcomes.

- Alignment with existing system expectations is important for leading local change, and the Deep Learning Conditions Rubrics are essential to identifying what needs to change and how to make it happen beyond the school and Cluster levels.

CONCLUDING SUMMARY

Deep learning has marked a significant shift in practice for NPDL participants. Clusters are taking the time to develop a shared understanding of tools and processes in order to build together from a firm and collective knowledge base. Submitted Conditions and Progression ratings show that deep learning competencies and conditions are widely *Emerging* throughout NPDL Clusters. Ratings reflect the need to cultivate and develop learners' capacity for success in the 6Cs, as traditional pedagogies have not facilitated student development of these key competencies. Participants are embracing the journey to deep learning, and believe that its outcomes will lead to success for learners, their communities, and the world.

The four elements of the new pedagogies (Learning Partnerships, Pedagogical Practices, Learning Environments, Leveraging Digital) combine and interact to great effect in the design, implementation, and measurement of deep learning. They have provided the framework for the creation of meaningful deep learning experiences that enable student development of the 6Cs. Exemplars demonstrate that the design of deep learning experiences has been effective in alleviating challenges such as 1) the alignment of NPDL and curriculum, 2) working with the Deep Learning Progressions to measure learner development of the 6Cs, and 3) assessing student performance using a broad range of evidence. The moderation of Deep Learning Exemplars contributes to deep learning at all levels of the initiative.

NPDL implementation has proven the viability of a global framework for working with deep learning. The level of collective capacity building present at all levels of the partnership is supporting deep change for participants, who are looking for additional means of connecting within and across Clusters to further their own work and others'. Participants are embracing the level of freedom afforded by the NPDL framework and tools, and have identified the importance of capacity building support in 1) selecting an entry point for work with deep learning, 2) developing the leadership required to flourish with NPDL processes, and to support others to do the same, and 3) using the tools to align NPDL within system expectations while also leading change at the school, Cluster, and system levels.

Key areas of focus moving forward include 1) supports targeted at deep learning measurement and assessment, including the creation of resources and tools to support understanding and application of the New Measures, 2) increased focus on data submission, leading to measured progression of competency and conditions development for formative use within Clusters and globally, 3)

broader sharing of moderated Exemplars throughout NPDL, supported by greater emphasis on local moderation and deep learning design, 4) deep, global-level capacity building support for new participants, and 5) enhanced and additional means for connecting participants globally. In addition, NPDL will be the subject of an upcoming external evaluation intended to further evaluate both the current impact of deep learning as well as important areas for growth.

NPDL participants have demonstrated the impact of deep learning on student outcomes, as well as the capacity to design learning that makes a difference in students' lives and communities. New pedagogies are already transforming the teaching and learning processes throughout NPDL Clusters, where teachers and other leaders are using the same tools to develop deep learning outcomes on a global scale.