

TD4Ed TEACHERS DESIGN FOR EDUCATION

Unleashing the Potential of Teachers as Designers | JUNE 2014



BILL & MELINDA
GATES *foundation*

We are TD4Ed.

WHEN WE FACE A PROBLEM,
we define it as an **OPPORTUNITY** for **CHANGE**.

BEFORE DECIDING ON A SOLUTION,
WE FIRST EXPLORE
WHAT IS REALLY NEEDED.

WE REFLECT ON OUR LEARNINGS
*TO **BROADEN OUR PERSPECTIVE.***

WE COLLABORATE,
SINCE WORKING AS A TEAM
CREATES VALUE TOGETHER
THAT CANNOT BE CREATED ALONE.

WE THINK BEYOND *CURRENT CONSTRAINTS*
to imagine **WHOLLY NEW POSSIBILITIES.**

WE PLAY WITH IDEAS
BY TESTING THEM TO GET FEEDBACK
AND THEN WE ITERATE ON OUR DESIGNS.

WE USE STORYTELLING TO
CONNECT, INSPIRE,
PERSONALIZE & PERSUADE.

WE SEEK TO SPREAD OUR SOLUTION IN ORDER TO
TRANSFORM OUR CLASSROOMS, SCHOOLS,
DISTRICTS AND COMMUNITIES.

WE ARE TD4Ed

AND WE ARE DESIGNING A BETTER
EDUCATION FOR OUR STUDENTS.



BUSINESS
INNOVATION
FACTORY

TD4Ed is powered by
the Business Innovation Factory.
Learn more at td4ed.com

TD4ED SUPPLEMENTAL PACKET

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To see the full report, go to
www.td4ed.com/td4ed-report.pdf

Would you like to learn more?

Check out the online platform at www.td4ed.com

Interested in understanding how TD4Ed works?

Browse our curriculum

Define: www.td4ed.com/curriculum/define

Explore: www.td4ed.com/curriculum/explore

Reflect: www.td4ed.com/curriculum/reflect

Imagine: www.td4ed.com/curriculum/imagine

Play: www.td4ed.com/curriculum/play

Transform: www.td4ed.com/curriculum/transform

Want to see TD4Ed in action with our teams?

Check out their stories

Team Innovate: vimeo.com/104719406

Team Warwick: vimeo.com/101938253

Team Nettelhorst: vimeo.com/104718224

Curious about other projects teams have tackled?

See their solutions at www.td4ed.com/projects

Inspired to start your own project?

Jump in at www.td4ed.com/curriculum/start-project

INTRODUCTION TO THE PROJECT

At the Business Innovation Factory, we believe in the power of design thinking. We use these principles of human-centered design to generate and test new business models in complex social systems like healthcare, education, and government.

We used the principles of design thinking to build this project - from beginning with a design challenge and ending with a meaningful solution that is implemented in the real world. To stay true to our TD4Ed curriculum as well as our development process, we have framed our project through the lens of our six-phased design thinking curriculum.

We use this document as a vehicle for sharing our journey and learnings along the way, and also as a case study for how design thinking can be used in a larger organizational context.

What is design thinking?

It is a proven approach for identifying opportunities, creating new ideas, and accelerating change through experimentation. It brings a human-centered, creative, and rigorous approach to problem-solving by tapping into creative competencies that we use everyday.

DEFINE

Reframe a problem as an opportunity for change

EXPLORE

Build a deeper understanding of your challenge

REFLECT

Make sense of what you are learning

IMAGINE

Generate meaningful ideas

PLAY

Develop and test your idea

TRANSFORM

Grow your solution and advance your personal journey

Research

BIF set out to deeply understand the context around our design challenge, which would help inform future solutions. Building upon insights from the 2012 Feedback for Teachers³ study we completed the following activities:

1. Engaged an advisory group of educators in the Rhode Island area to help us design the TD4Ed teacher experience. With them, we developed messaging, gathered insight into how to recruit teachers, and edited a first draft of the curriculum.



Shawn Rubin
Roshni Mirchandani
Lucas DuClos
Keith Nalbach



Rebecca Taub
Dawn Casey-Rowe
Kyleen Carpenter
Jessica Waters

³.Business Innovation Factory. (2012). “Feedback for Teachers: A qualitative study of how teachers receive, share and make meaning of feedback.” Retrieved from <http://www.businessinnovationfactory.com/projects/student/portfolio/feedback-teachers>

2. Interviewed a variety of innovators within the education and design sectors in order to understand the platforms that are currently being used, and trends in the teacher leadership and engagement space.

Karen Brennan, HGSE and ScratchED

Jeff Dunn, DeVry University

Melissa Goodwin, Goodwin & Sommervold Consulting

Alex Hernandez, Charter School Growth Fund

Jack Klett & Natalie Nixon, Philadelphia University

Ben Kutyllo & Daniel Rogers, Chicago Public Education Fund

Carlos Moreno, Big Picture Learning

David Sebek, Creativity 2.0

Sheree Speakman, CIE Learning





3. Conducted an audit of current education innovation platforms and resources.

DesignEDU - www.designedulab.org

d.school K-12 Lab - www.k12lab.org

Henry Ford Learning Institute - www.hfli.org

EdCamps - www.edcamp.org

Stack Overflow - www.stackoverflow.com

IDEO Design Thinking for Educators -

www.designthinkingforeducators.com

Code Academy - www.codecademy.com

Skillshare - www.skillshare.com

Working Examples - www.workingexamples.org

4.0 Schools - www.4pt0.org

Insights

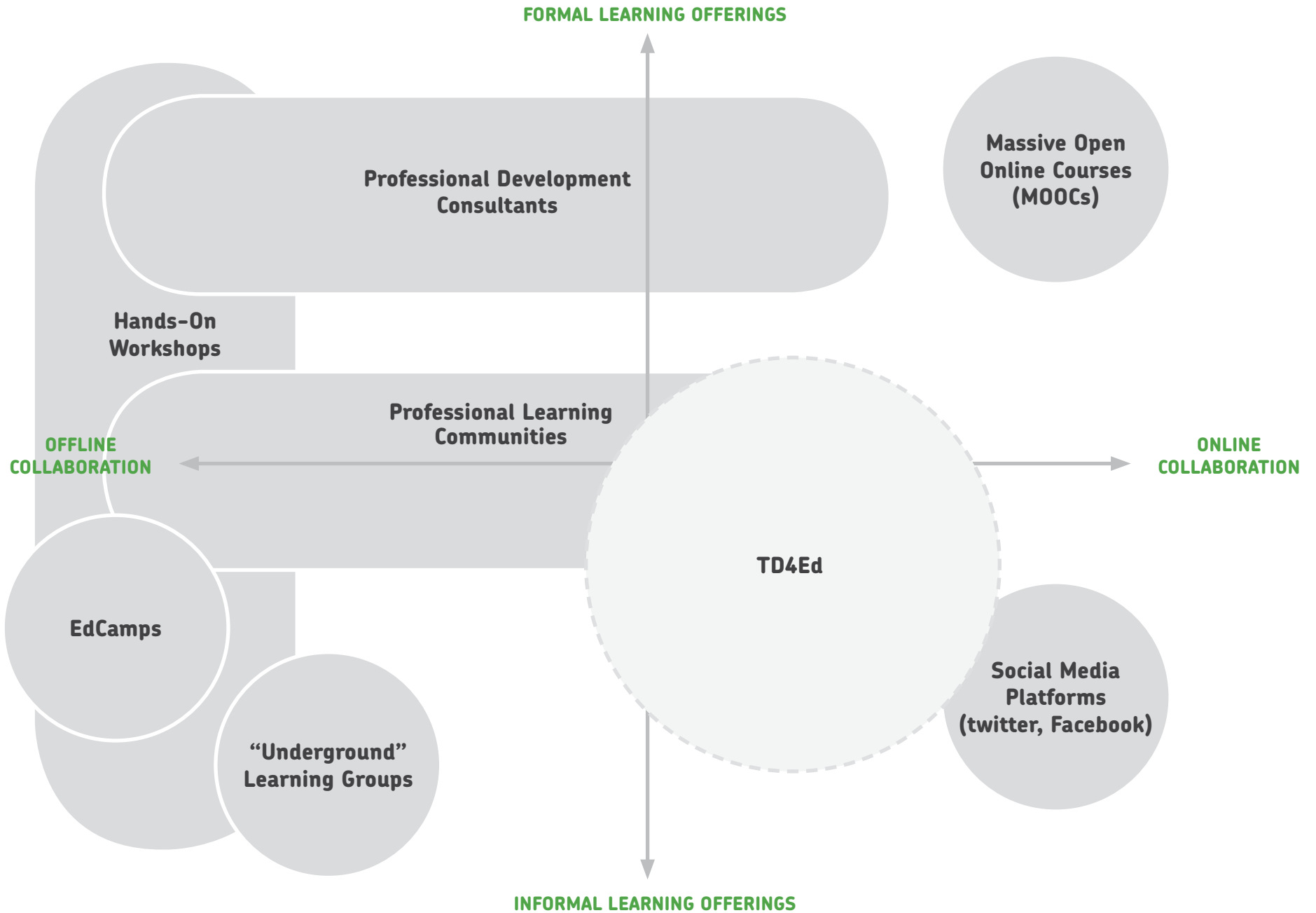
Based on our exploration, we developed insights about what is currently lacking in learning platforms for education & design. This helped us frame how we might position TD4Ed as a new offering to fill those gaps.

What is currently lacking:

- *Hands-on training:* We heard from many educators that professional development is typically encouraged through a presentation or lecture, which often don't enable hands-on learning. Because of this, they aren't able to practice what they learned until they are back in their classroom, on their own time. They struggled to ground the learning in the current context of their practice — making it less likely that they will find the training meaningful and valuable.
- *Collaborative learning:* Teachers rarely have the time and space provided within school to collaborate together, even though they frequently rely on their peers for help. They crave more moments of collaboration to help solve challenges in their daily practice. Instead, the structure for learning within the educational system tends to be individualized, rather than enabling teachers to work together and build new value alongside their colleagues.

- *Innovating from within:* There has been much progress on building teacher entrepreneurs who take initiative in innovating within education. The potential problem that this causes is that these forward-thinking educators and leaders move their focus from the classroom to other sectors. We need to have teachers that lead, but won't leave. It's important for us to support teachers as they innovate within the education system so we aren't losing their value in the classroom. We want to be able to change the face of education from within, rather than from outside.
- *Integrated platforms:* With a plethora of new platforms that are developed for teacher professional development, the choices are overwhelming. Currently, teachers are mashing together different products and approaches, effectively hacking together their PD strategy. In order to fit their current behavior patterns, we should ensure that we are building in ways to connect to key platforms that teachers use (such as Facebook, Pinterest, or Twitter) to create an integrated platform.

Opportunity Map of Current Learning Offerings



Design Principles

From these insights about the current experience, we developed design principles — guiding values or criteria that new solutions must have, rooted in the needs of those at the center. These design principles provide the basis and drive for the development of a solution.

In order to be successful, TD4Ed needs to:

Provide a meaningful experience for educators

The experience must be relevant to them in order to make it meaningful — tackling problems that they are passionate about, and making something real, tangible, and lasting.

Integrate into teachers' already busy lives

This experience can't be seen as “one more thing...” for someone with little free time. In order to successfully engage educators from beginning to end, it must be easy to access, quick to understand, and compelling to complete. Otherwise, we risk losing their attention and engagement.

Create value together that can't be created alone

Collaboration is a key part of creative problem-solving, and it starts by building a team of individuals with different strengths. To foster an active community, we must create the conditions for peers to support, share, and collaborate together.

Invigorate teachers' practice

Even though the approach is called “design thinking,” the experience is about doing rather than thinking. Through a “learning while doing” approach, we can tap into key mindsets that teachers can use within their own practice, such as empathy, experimentation, embracing failure, and visualization. By providing a process for creative problem-solving, it can facilitate the transformation from frustrated teacher to confident and passionate leader of change.

Use storytelling to highlight change

Enabling teachers to bring their experience to life through storytelling, inserts their voices into the national conversation about transforming education and improving outcomes. We need to message the value of not just of the solutions, but of the process itself.

Foster sustained engagement

Foster continued engagement with the platform, community, and design thinking within education will increase the impact of the TD4Ed platform, community, and design thinking within education. We must find the right motivators to provide teachers with the right value at each moment of engagement.

With these design principles as our guidelines, we were ready to develop a model for delivering this experience to teachers.

TD4Ed Concept Summary

With our design principles in hand, we developed a model of the TD4Ed experience.

Teachers Design for Education (TD4Ed) is an online platform that uses a design thinking curriculum and collaborative teamwork between educators to help them tackle challenges within their classrooms, schools, districts, and communities. The platform unlocks teacher potential, empowering them to generate meaningful and valuable solutions to some of the toughest problems within the current educational system.

Teachers who use the platform:

Tackle a real-world challenge

A team of three to five teachers can use the TD4Ed program to tackle a challenge they're facing within their classrooms, departments, schools, districts, or communities using design thinking.

Collaborate with others

The TD4Ed journey includes an online curriculum and in-person collaborative teamwork to design a solution to a real world challenge.

Learn by doing

The program uses elements of project-based learning to tackle a real-world challenge. The curriculum centers on a series of activities that build upon each other throughout each phase and the whole experience. In addition to the activities, we've provided multimedia videos, tips, and resources.

Share their story

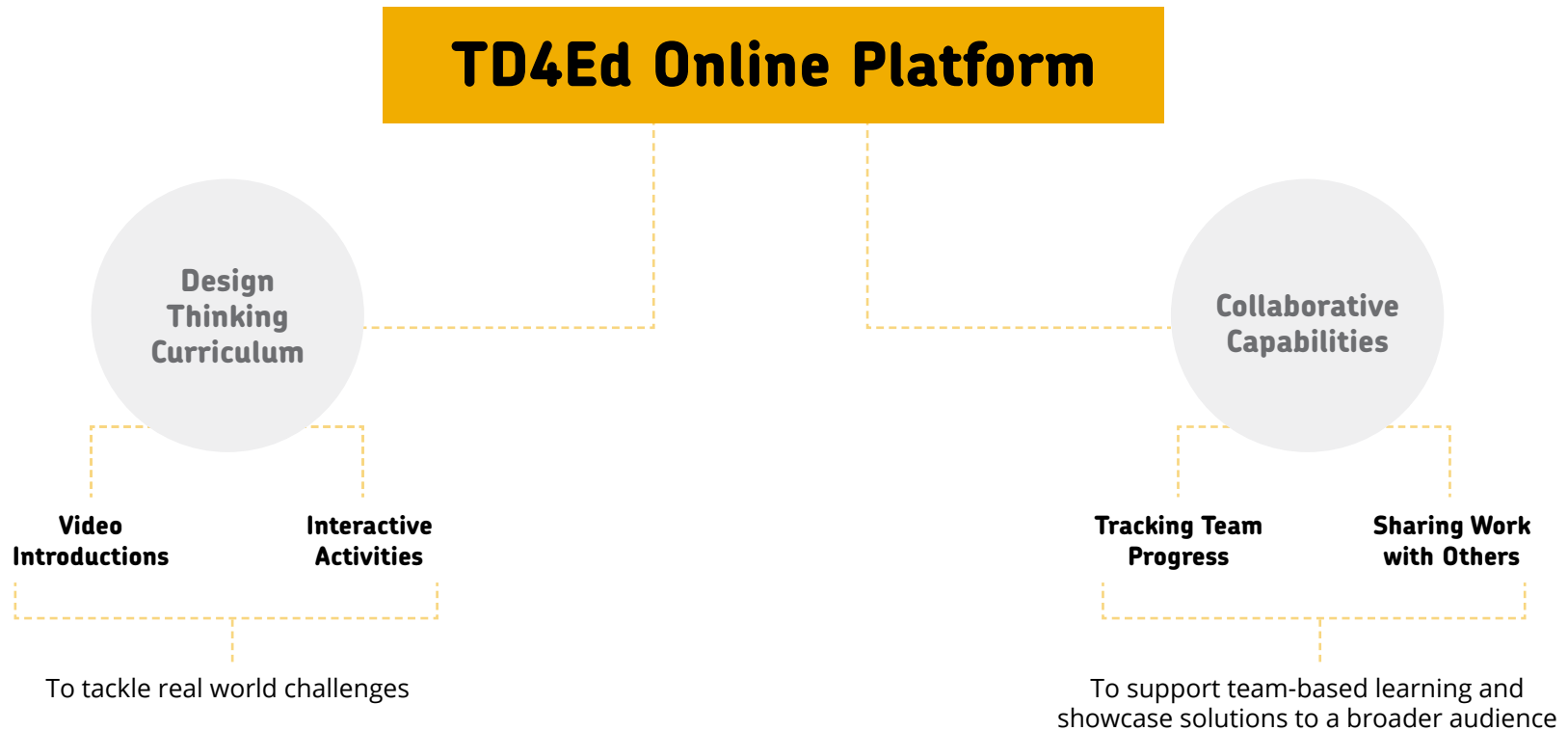
Along the way, teachers will record their process and learnings to form a story that they can share with others, including their fellow teachers, administrators, and the public.

“I know that this is a process I will use in my own teaching both in and out of the classroom. You’ve all taught me a new, invaluable, skill that I will be using moving forward.”

– Teacher from the Rhode Island pilot

There are two major components of the platform:

1. A multimedia, activity-based design thinking curriculum, through which educators can learn how to use the tools of design thinking
2. Collaborative capabilities that enable communication between team members, tracking their progress as they journey through the curriculum, and sharing their work and learnings with others



Goals for the Play Phase

We began this phase of work with the goal of developing and testing our prototype — a collaborative design thinking platform for teachers. This platform would be the foundation of TD4Ed moving forward. This phase of work included the following objectives:

- Develop and refine the online design thinking curriculum based on user testing
- Build and sustain engagement with teachers as pilot participants
- Establish a community of users
- Identify potential partnerships for further development
- Produce a foundation of stories to highlight the process and outcomes from the TD4Ed platform
- Determine a set of future features that would enhance the user experience

Methodology of TD4Ed Prototyping

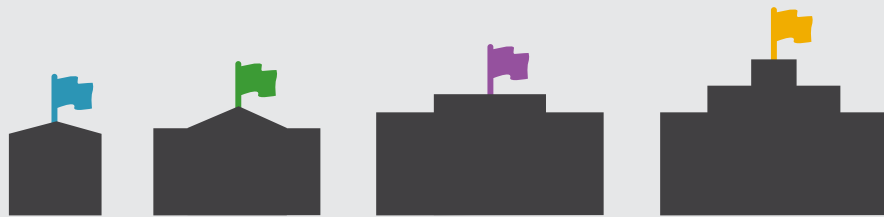
Recruitment

We developed and tested the TD4Ed curriculum and platform in three pilot locations where we could establish strong networks — Rhode Island, Chicago, and Philadelphia. The rollout of the pilot engagements occurred in six-week staggered cycles to enable an iterative build of the platform, curriculum, and activities. We later added two online pilot teams (one in Rhode Island, one in Massachusetts) to learn how teachers journeyed through the program without in-person facilitation.

Pilot schools were recruited with the help of “on-the-ground” supporters who had deep knowledge of the local educational environments, with the exception of the Warwick team in Rhode Island who reached out to us directly. Public and charter school networks were targeted to gain insight into how the platform works in resource-constrained environments. One exception was made for IIT/Boeing Scholars Academy, an after-school program, in order to test the platform in a non-school setting.

Participating educators within each school were then recruited by their principal or other administrators based on the interest and availability of educators. To ensure that participating teachers would have the support of their administration to test some of their ideas, principals or heads of school were required to sign a Memorandum of Understanding.

In total, we recruited 13 teams of educators — 50 educators in all.

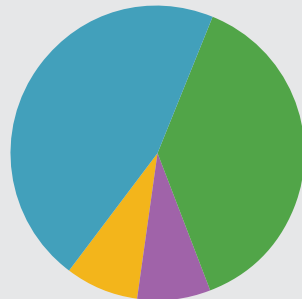


SCHOOL LEVEL

ELEMENTARY/MIDDLE SCHOOL: 4 **MIDDLE/HIGH SCHOOL: 2**
MIDDLE SCHOOL: 1 **HIGH SCHOOL: 6**

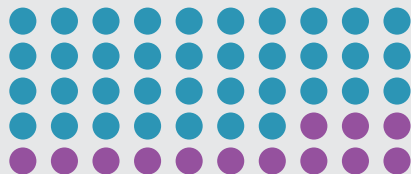
SCHOOL TYPE

TRADITIONAL PUBLIC: 46% (6)
PUBLIC CHARTER: 38% (5)
ALTERNATIVE: 8% (1)
AFTER SCHOOL: 8% (1)



GENDER

F: 74% (37)
M: 26% (13)

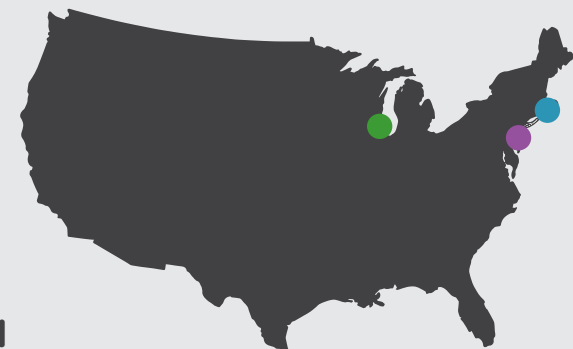


TEACHING EXPERIENCE (YEARS)



SUBJECT TAUGHT

- GENERAL: 28% (14)**
- ENGLISH/LANGUAGE ARTS: 18% (9)**
- MATH: 14% (7)**
- SCIENCE: 8% (4)**
- TECHNOLOGY: 8% (4)**
- HISTORY/SOCIAL STUDIES: 6% (3)**
- LANGUAGE: 4% (2)**
- SPECIAL EDUCATION: 4% (2)**
- ADMINISTRATOR: 4% (2)**
- ● ● OTHER: 6% (3)**



LOCATION

RHODE ISLAND: 4 TEAMS (17 EDUCATORS)
CHICAGO: 4 TEAMS (15 EDUCATORS)
PHILADELPHIA: 3 TEAMS (12 EDUCATORS)
ONLINE: 2 TEAMS (6 EDUCATORS)

Results

Based on what we observed from our participants, as well as feedback we received following the pilot, we understood what worked well about the platform in its “final” form & what improvements could be made.

1. Did participants stay engaged throughout the process?

Positive signs

- All teams completed the full curriculum
- Each team was represented in every weekly check in and workshop
- Participants continued to stay in touch with each other and the BIF team via Twitter, email, and in person

Potential challenges

One online team struggled to find time to complete the activities in the suggested schedule, though they eventually completed the work

There were activities/phases that teams consistently struggled to complete (such as activities in the Reflect, Play, and Transform phases)

Collaboration on platform is currently limited to within teams, rather than between teams

Many participants struggled to find time to complete the activities - even with professional development time provided from their administration.

Recommended steps for platform improvement

Build in light touch “email reminders” or “weekly tasks” for encouraging completion

Complete a “site audit” to streamline curriculum and revisit activities that had low completion rate
Leave more time for certain phases, such as Reflect and Play

Build an area on platform where teams can collaborate and share with each other

Extend some phases that were more time-intensive.
Explore how TD4Ed could be a credentialed offering that teachers could use towards their professional development hours.
Ensure that the experience is valuable enough to motivate teachers to complete the program

2. Did participants generate meaningful, valuable, and actionable solutions to their challenges?

Positive signs

- All teams created a concept that they tested and/or presented to their colleagues
- Some teams have recruited additional supporters to continue to develop their solution
- All teams are moving forward with their concepts to further test or implement in the 2014/2015 school year —with the support of their administrators

Potential challenges

Many teams had difficulty moving from discussing their concept to creating prototypes, which hindered the process of testing their concept in the real world

Difficult to distinguish when participants should shift from Play (developing iterations of prototypes) into Transform (implementing their solution)

Unclear when the program ends, or how to continue to update on progress

Recommended steps for platform improvement

Revisit how activities are structured and messaged to encourage rapid prototyping

Revise activities and messaging to distinguish between the two phases

Leave more time for Play

Define a “stopping point” - for instance, submitting a badge or professional development credits, uploading an overview video of complete project, etc.

“It was awesome to share our concern, and not a directed concern. We had a chance to improve what we thought needed improving, that is very powerful. It keeps people vested in their work.”

- Teacher from the Rhode Island pilot

3. Did participants learn the value of TD4Ed and design thinking?

Positive signs

- Great feedback about the program and how it changed participants' thinking in their own practice — a testament to building transferrable skills
- Many participants felt like “design thinking experts” after completing the TD4Ed curriculum
- Participants had clear next steps for wanting to spread TD4Ed and design thinking approach to colleagues & larger networks

Potential challenges

Capturing evidence of “changes” that program has made — on challenge, teaching practice, and personally — requires a longer testing period

There were points in the process where participants felt “in the weeds” — confused, lost, and even frustrated

Unclear when the program ends, or how to continue to update on progress

Recommended steps for platform improvement

Include metrics capture via initial & post-program survey

Use badging as a way to give credit for work done within each phase and as a whole program

Message the “fuzziness” of the process — that you will feel lost at points, but trust in the process

Build in real-time support capabilities, such as weekly check-ins (via Twitter or Google Hangout) so teams that feel lost can receive advice or support from others

Define a “stopping point” — for instance, submitting completed work for a badge or professional development credits, uploading an overview video of complete project, etc.

4. Did participants feel invested or inspired about their work as educators as a result of the program?

Positive signs

- Many participants felt the program reinvested them in their practice and career, due to the excitement and passion for education reform that it ignited.

Potential challenges

Several participants left their current schools for positions at new schools. While the reasons for the transfers are not known, this may have implications on how they will continue to move their work forward, or whether the program was able to reinvest them in their current positions

Recommended steps for platform improvement

Track the experiences of pilot teams post-TD4Ed to better understand the long-term implications of the program

Create a set of stories that show the impact of TD4Ed projects have on teachers' schools, practices, and lives

Build a community that can provide advice and/or support to those in need

“We were challenged to focus on people’s needs and NOT solutions.”

- Teacher from the Chicago pilot

Key Learnings

While much of the work during the pilot phase of TD4Ed was focused on building the design thinking curriculum and platform, BIF has found several overarching learnings about the experience of our pilot participants that can be applied more broadly to teacher-led innovation and professional development. These key learnings also reveal a series of opportunity spaces that signal both potential areas of additional research research, and solutions for prototyping and piloting.

Teachers have bold challenges they want to address together

When we began each pilot program, we started with the Define phase — where participants turn a problem into a design challenge they can tackle. Some participants had already prepared challenge areas (though most of them shifted over the course of the program), while others needed more discussion to get to the challenge that they all wanted to tackle. But all teams chose big, bold problems that many schools and districts are struggling with — from teacher retention to technology rollouts to addressing the “whole child” (which includes both academic and social-emotional factors) in their learning. In spite of challenging conditions and moments of feeling overwhelmed, all continued on their journey. In the span of six weeks, our pilot participants developed solutions that they felt confident about and ownership for, with support from their administration to implement.

The challenges they tackled grouped into four areas:

1. Increasing student achievement,
2. Building school culture,
3. Personalizing professional development, and
4. Collaborating beyond the four walls of the school.

They are not small challenges, nor are they individual to one type of grade level, department, school, city, or community. They are important challenges that every educator faces, and many are ready to solve.

Teachers embrace a “blended” model of engagement

When we began this work, we knew that the success of this program hinged upon the engagement of our participants. As advocates for design thinking and human-centered design, we know there are moments of frustration and confusion. There is a lot of work that goes into the development of meaningful and actionable solutions, and our participants have gone through all of this for the first time on top of their teaching priorities. Therefore, we know that if the program doesn't keep them engaged and motivated to persevere, then it will fail to gain the traction it needs.

During the pilot, we used a blended model of in-person and online collaboration that was born out of a strategic structure to help us test the TD4Ed platform. We found that teachers loved this model of learning and collaborating, and voiced strong support for keeping the in-person elements. We hit on a sweet spot in terms of facilitating the collaborative experience that teachers often seek. By using the combination of a robust online platform for individual learning, team-based activities, weekly check ins, and periodic in-person gatherings, it provided a balance of structured activities and unstructured collaborative opportunities.

“The freedom to just be able to ‘think freely’ was amazing... strange, but amazing.”

- Teacher from the Philadelphia pilot

Cross-collaboration fosters cross-pollination

Another serendipitous learning moment occurred based on the way we structured the pilot program. By building TD4Ed as a team-based experience, and incorporating hands-on workshops that brought different teams together, teachers capitalized on the opportunities for collaboration and relationship-building across grades, schools, districts, and cities. As teachers from different backgrounds shared what they learned about their design challenge, they realized that their struggles were more similar than they thought, and broke down the barriers between traditional and alternative, public and charter, and neighborhood and district. Ultimately, the cross-collaboration fostered the cross-pollination of challenges, ideas, and best practices outside of the four walls of their school to make not only their project, but also their practice, more effective.

Teachers thrive when given the space for creative problem-solving

While we do not yet have long-term metrics about the lasting impact the TD4Ed platform has had on participants, they ended the pilot program with excitement and enthusiasm about how to bring the TD4Ed experience to others - especially their students, colleagues, and larger education community. They were recognized by their peers, administration, and even state legislators for their innovative solutions as well as renewed sense of agency and autonomy. Because the experience inspired them to lead positive change within education, they felt invested not only in the growth of their solutions, but also the growth of TD4Ed to the larger teaching community.

How might we scale and spread TD4Ed and teacher-driven innovation?

Context

TD4Ed was developed as a way to learn the principles and tools of design thinking by tackling a real-world challenge. We had originally envisioned the solutions teachers created as a vehicle for learning, but through the process, our participants developed powerful and exciting solutions to their challenges that they brought back to their classrooms and communities. Below are several approaches we can take to facilitating and showcasing the ideas and solutions that come out of the platform.

Approaches

Spread the user base.

There are many other stakeholders in the educational system — including students, administrators, and parents. Why stop at teachers when we can develop additional design thinking offerings for these other user groups to tackle educational challenges? We can develop offshoots of TD4Ed for each of these stakeholders, or leverage the deep experience that each of these stakeholders possess by developing a platform that cross-pollinates innovative ideas from a variety of these user groups.

Develop national partnerships.

In order to scale and spread the blended model of TD4Ed, we can partner with national education organizations, such as Teach for America and City Year. Through professional development sessions and courses, we can train entire cohorts of teachers with a mix of the online platform and in-person workshops.

CONCLUSION

After six weeks with the TD4Ed platform, we witnessed the tremendous impact the experience has had on our teams of educators. Imagine what it might look like if we could build more meaningful experiences into existing professional development structures... Or enable more collaborative opportunities for innovative teachers to connect with other trailblazing educators... Imagine how this could positively change the face of education.

We've built a foundation of teacher-driven innovation with thirteen teams of educators. We intend to continue this work with more educators, more partners, and more opportunities to make lasting impact. We know we can continue to transform the education system — together.

To join our pilot teams of teachers in realizing your creative potential, go to www.td4ed.com and become a leader of change with them.