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Schools as Providing Transformational Goods

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ABSTRACT

In an age of radical innovation, transforming societies, and globalized relationships, our opportunity to unlock human potential has never been more salient. While a variety of approaches have shown promise in this area, achieving this goal at scale has been hampered by thinking and designs that position learning as a process of knowledge transmission and content acquisition. Clearly content has a significant role in increase people potential, but many designs treat context acquisition as necessary and sufficient, neglecting meaningful engagement with one's life possibilities as an integral part of the learning process. Instead, herein I posit that relevance, use, and ecosystem empowerment are treated as necessary considerations if not the core focus of any innovation designed to unlock human potential. From this anchoring belief, here it is argued that educational designers need to reposition educational innovations less as interventions designed to fix deficient humans, and more as invitations intended to recruit the learner in leveraging that which is being learned to accomplish goals that are important to them.

Keywords: Platform Technologies, Connected Learning, Growth, Innovation

THE NEED FOR RELEVANCE

We are living in a period of rapid technological change, and recent innovations are powering frameworks and services that are reframing how companies cultivate brand identity and serve their customers. At the core of these transitions is the decentralization of traditional product pipelines, and instead a focus on orienting products and services to empower customers in accomplishing local goals that are important to them. In this line of thinking, what a product enables and what customers do with the product is emphasized over the product as a set of particular features, allowing companies to better capture the needs and connect with the use-goals of customers. For example, Nike has led one of the largest marketing campaigns over the last decade focused on a reformulation of brand, with a shift in focus from the products they make (e.g., shoes, shirts, jackets) to instead highlighting what customers do with their products (e.g., get healthy, run fast, look good), with customer stories defining what is their core identity.

Whereas companies are rethinking what is their “product,” most formal learning institutions still consider the ideas as described in textbooks as *what* they are teaching and NOT the *potential of the learner to achieve* goals they care about. Too often educators privilege the to-be-learned content over the situation in which it has value or the learner who will be responsible for creating this value. Integration and value creation become an

afterthought, skirting the responsibility for whether the learner can, or will, engage the content in situations where it might prove useful. There is little accountability for the relevance of the content with the design of most learning environments focused on what is to be taught, and not what progress do learners want to make.

Educators have put the cart before the horse, with relevance being more on how what is being taught relates to the scope and sequence, course textbook or big ideas than the situations in which the learner desires to make progress. In contrast, when one prioritizes functioning-in-world over content acquisition as the learning activity, then the criteria for success becomes whether the individual can, and chooses to, leverage the to-be-learned content in ways that are relevant to goals that (s)he views as important. In fact, we are witnessing more and more companies repositioning their entire product identity around what customers do with their products and services (verbs) rather than decontextualized descriptions of their products and services (nouns) (Barab, 2018; Christensen, Duncan, Dillon, & Hall, 2016).

While the former characterization highlights particular features of what ostensibly is the product, the latter highlights the value of the product to users in the world. The below graphic depiction (see Figure 1) advanced by Useronboard.com illustrates the contrast quite vividly, highlighting that a company's product is NOT that which they design but, instead, people using the

design to accomplish goals they care about. Said simply, companies are selling empowered customers. Applying this insight to schools, simply imagine if educators and designers focused on what learners want to accomplish, and positioned the activities such that “learning” was motivated by goal realization with the value of content being bound up in the use-transformations it supported as opposed to the transactional value where correct understanding is exchanged for a grade.

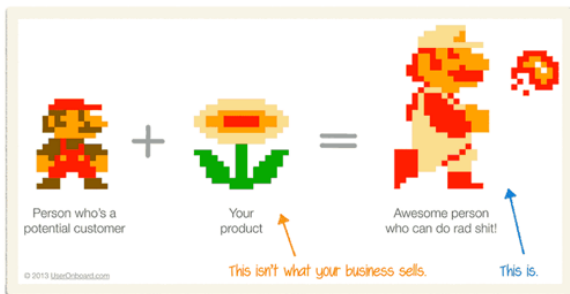


Figure 1. Illustrative example of a shift in what is a company’s product developed by UserOnboard.

From this perspective, everything shifts from being able to regurgitate the structural properties of an idea independent of use to engaging the idea to accomplish goals that are of value to the learner. This is not to undermine the value of “content;” in fact, it elevates its value from residing in its ability to be exchanged for a grade (exchange value) to the work it will allow the learner to do in the world (use value). This re-articulation of “what is a company’s product” is further evident in Jason Fried’s 2013 tweet (<https://twitter.com/jasonfried/status/400733165964099584>, see Figure 2), capturing a different way of a defining their brand value. If educators embraced this shift, how we support learning would be designed quite differently, focusing less on the abstracted universal and more on what the learner could do with it.



Figure 2. Tweet contrasting two perspectives on how company’s describe what they offer to customers.

Most formal learning institutions still consider their product to be the abstract concept, practice, idea that is

being taught as opposed to how the learner’s being able to do “rad shit” in situations that are relevant to them (UserOnboard EXPOSED!). This perspective, while consistent with those that treat content as having inherent value beyond the work it does in the world, is in sharp contrast to an emerging line of thoughts in the Learning Sciences that place meaning in the world—as opposed to in the abstracted descriptors of the world (see Sawyer, 2014). Schools, still focused on their descriptions of their product or even their descriptions of what their product can do, are too often enamored with textbook characterizations and disembodied articulations than with powering learners to accomplish relevant goals.

In this latter perspective, it is learner progress and how she is able to integrate the ideas into her situation that are considered the meaningful expression of the content. When one focuses on the goals of learners and not simply the decontextualized content, a core capability becomes how to engage learners in the right mode, at the right time, and in the right context so that they contextualize the content to help them meet their goals. Said another way, the products and services need to be perceived by learners as enabling them to accomplish particular goals in ways that they could not experience unless they leveraged the products and services. And, their progress (within reason), not the perfect expression of the content, needs to be valued as a legitimate form of content expression. This line is consistent with the work of Toyoma (2015) who found that in an examination of hundreds of large-scale implementations supported by the Gates Foundation, it was those innovations that amplified what is happening on the ground that were the most successful even if the innovation required somewhat transformative practices.

THE ROLE OF INNOVATION

To bring new models of learning to life, systems need to be designed based on the belief that all people can accomplish great things, and that learners come with untapped potential that needs to be *invited*, *enabled*, and *released*—not merely transmitted from a centralized source. We need systems that inspire learners, cultivating through experience a contextualized understanding and aspiration for how they would use domain-specific content to create value and impact. And fundamentally, we need systems designed to support learners in creating value, with its key value lying in its potential to cultivate the capacity of system users to imagine, grow, create, and inspire (Barab, Arici, Aguilera, & Dutchin, in press). Designing such systems requires new ways of thinking

that recognize all people's potential to thrive, and that are based on an invitational, rather than interventionist, frameworks.

At the core of an *invitational* methodology is the belief that unlocking human potential begins with an invitation, intended to engage the learner in wanting to realize a meaningful possibility. This is in sharp contrast to innovations focused on an interventionist or deficit framework, where the goal is to insert external fixes into broken individuals or ecosystems. From an invitational perspective, the challenge is how designs share agency and meaning, allowing the learner to co-determine structure and impact with our system, with each other and with the contexts of implementation (Engeström, 2011). The design intent is to push the responsibility for impact from the developed "product or service" out to the nodes (i.e., to each of the individual participants and the ecosystems in which they participate, and not in the designers or even the products themselves).

This does not mean that designers relinquish responsibility for impact, only that it is shared, unlocked, and empowered—not caused in a linear fashion. The focus is less on the push of the intervention (product centric), or even on how service providers support its local integration (service centric), and more on the ways the learner accepts the invitation to engage in their own transformation (Barab, Arici, Aguilerra, & Dutchin, in press). Toward this end, all forms of engagement are not created equal; it is essential that the invitational stage involves some notion of a learner's imagining where and how they can thrive and include the necessary structures such that they are likely to succeed. The key here is that the enactment of *invitation* builds a broader framework of possibility, even as the learner is still growing her ability to realize the outcome. Through this process, the learner develops a vision about the value of what they are learning, about what they could do with it, and about who they might become.

When it comes to learning, students and teachers need to feel emotionally connected to the ideas and skills they are applying/constructing (Fischer, Bernstein, & Immordino-Yang, 2007). People learn better when they are interested, curious, passionate, and engaged, and when they feel safe, welcomed, and valued (Fischer, Bernstein, & Immordino-Yang, 2007). If the invitation is successful, learners engage the enabling content with use-focused goals, thereby changing their appreciation for that which they are learning. In a thrive-focused learning system, it is the personally meaningful release—the real-

world outcomes that the learner is working towards – that motivates and gives meaning to the learning. Here, a thrive-focused learning system is meant to imply the focus is on value-creation, with learners being required to apply that which is being learned to create value in the world in ways that are personally meaningful and socially-significant. Further, it is their particular application, driven by their intent and transformative potential in the world that is the learning with content consumption simply being a resource amplifying the success of the application system.

One question for designers is what is the role of technology if not to transfer content, and how can innovation help support learners in creating value? One response to this challenge has been the impetus behind the so-called "platform revolution," where consumers can be producers and the core technology being to match consumers, producers, and the real-world need (see Parker, Van Alstyne, and Choudary, 2016). Among proponents of this movement, the concept of a "platform" can be understood in contrast to "pipeline" technologies, with the latter intended to transmit value from a centralized source to a periphery. Pipeline technologies can be likened to interventionist approaches designed to transmit a solution into a passive recipient. Ultimately, many designers have failed to recognize that the true power of innovation lies within participants, and the role of technology is to augment and ignite the untapped potential within each of us. In contrast, platform technologies seek to empower participants to generate value for one another, and exchange such value in a way that is seamless, transparent, and widely accessible.

Applied to our development of learning empowerment systems, we can liken this to an educational model where expertise is developed in communities of practice, with a designed system facilitating the exchange of such ideas, experiences, and understandings. From this perspective, designed innovations can be a powerful part of such offerings, although not as a pre-packaged solution to be disseminated (see Figure 3). Instead, they might be more productively understood as one component of an empowered ecosystem that allows for the necessary transformations and integrations of the core ideas, such that they can enable the achievement of meaningful outcome. Integrated services need to become part of an empowered ecosystem where they can amplify existing capabilities by remaining responsive to local needs and strengths. It is those individuals at the implementation

sites who effectively become the true innovators, operating within an interpretive space through which they engage the on-the-ground adaptations and personal growth necessary for any design to bring about real-world value.

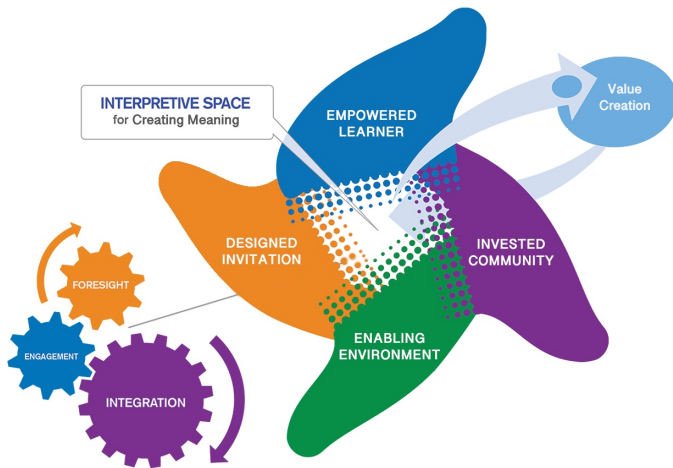


Figure 3. Ecological Model of Technology Integration

In this line of thinking, innovation is less an achievement of the designer, and more the realization of a possibility taken up by an individual. We can think of these innovators as those who have the foresight to imagine possible local expressions within a supportive ecosystem and persist in the integration of these ideas towards their successful release. Such a positioning requires a shift in perspective of where the innovation lives, with the innovator and innovation emerging each time a new implementation is engaged. In this latter model, while technology might be a necessary component in an innovation profile, it is only one part of an empowered ecosystem. In this framework, what happens around the innovation is more important than what happens within an innovation (Barab & Arici, 2017). The innovation, rather than being something located within a centralized, bounded product, is distributed across and realized through this larger ecosystem (Penuel, Fishman, Cheng, & Sabelli, 2011).

There are many platform technologies emerging through which it is the users that create and share value. This has involved a decentralization of where value is created and who has the potential to create value. In these spaces, the value is determined by reputational economies that ensure quality rises to the top, and preference algorithms that ensure people can connect to the services they need. However, such systems have yet to be substantially engaged to unlock human potential. To be clear, the framework being advanced is not meant to

imply that designers should shirk their responsibility for creating experiences that lead to meaningful outcomes. However, when we position our designed interventions as structured and scaffolded *invitations*, we begin to privilege the importance of empowered ecosystems over technological fixes (Sarewitz & Neslon, 2008).

Imagine if anyone could champion the growth of another, with learners having access to choose champions or peers who inspire them and who are working within the same or similar ecosystems, such that they can more effectively understand and help the learner create value in the places they desire to do so. Or, imagine if anyone who has something to share, can easily create growth and impact opportunities. How different might our understanding of education become? Such a positioning of consumers as potential producers is respectful, empowering, and we argue more powerful than any pipeline technology that treats the innovation as the change-agent, with the focus being to have a user move through and acquire a pre-determined set of structures. Of all places to look for untapped capacities, human beings are the richest resource we recognize, with each of us able to be an innovator – especially when operating within an environment that cultivates our potential to thrive. Even in those contexts with a clearly defined facilitator, there are things they could do to position their students as consumers and producers, becoming allies in supporting each other's growth.

THE POWER OF PLATFORM

A platform methodology can be seen as core to the success of companies such as Uber, AirBnB, Ebay, Waze, Facebook, Google Play, and the Apple Store among others. Platforms provide a connective tissue for consumers and producers to interact, with much of the success of the platform being in defining what is the core interaction, and providing effective search engines or algorithms for connecting consumers to producer products. Parker, Van Alstyne, and Choudary (2016) distinguish between pipeline and platform methodologies, stating:

A pipeline business employs a step-by-step arrangement for creating and transferring value, with producers at one end and consumers at the other; thereby operating as a linear value chain. Rather than flowing in a straight line from producers to consumers, value may be created, changed, exchanged, and consumed in a variants of ways and places, all made possible

by the connections that the platform facilitates.
(p. 23)

In many examples the platform designers while offering a service, have no actual product. For example, Uber has entirely disrupted the transportation industry and done so without investing in their any cars or drivers of its own. Important here is the ability of the platform to make connections, and provide a structure for people to share their services. While many growth frameworks want to offer more than platforms, there is something quite powerful in a thrive methodology of connecting growees with examples of success that are created, promoted, and advocated by other users. In a platform infrastructure, the “content” itself grows as more people engage the platform and share examples, with platform users taking responsibility for ensuring the knowledge of the platform is up-to-date and useful.

In our own work, we have been building a connected growth platform, ThriveCast, connecting people to thrive opportunities they want to pursue and along with a network of supportive peers (see <http://ThriveCast.org/> or Barab et al. (in press)). At the core of the platform are Thrive Modules, which involve a 3-stage growth cycle, where members *Connect*, *Grow*, and *Apply* these lessons to their own life. Within a Thrive Module, platform users connect to stories of other members, grow their skills, and create their own stories that can be shared to inspire others. In a nutshell:

- **Connect** – learning begins by connecting to peer stories to build a vision for what one can achieve. As they connect to these stories (via emoticons or sharing comments), they develop a vision or intention for what they might want to do as they start this module, at the same time growing a network of support. Their Connect meter expands to reflect this growth (see Figure 4).
- **Grow** – growth constructs are positioned as tools to help learners achieve goals that they value. In the grow stage, members can explore resources and complete learning activities that range from videos, PDFs, interactive problems, or simple reflections. Again, similar to Figure 4, the Grow meter expands to reflect achievements.
- **Apply** – learners are applying what is being learned in their local context to achieve desired outcomes. A core value-add of the platform is when members bring together insights gained from story connections, emerging capacities and relevant resources from the

grow section, along with personal aspirations to inform the creation of one’s own application story. This is where members engage their own voice and experience their potential to do something meaningful with what they are learning. Again, similar to Figure 4, the Apply meter expands to reflect progress.

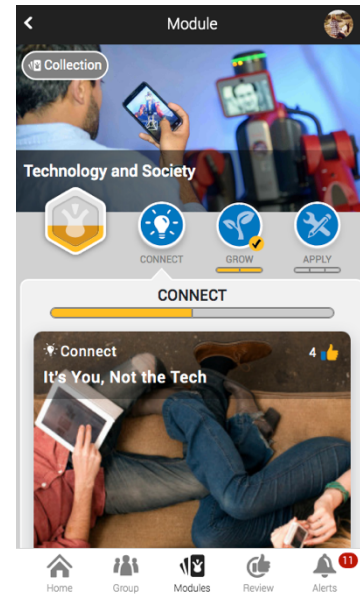


Figure 4. ThriveCast Connected Growth Cycle.

Beyond the Module, members can support their group progress, having the option of sharing their application experience, receiving feedback from others, and can even publish their lessons learned back into the platform to *Inspire* other members. While the connecting/growing/applying loop completes progress for a particular Module, there is often group requirements that include the expanded loop of connecting/growing/applying/inspiring. This latter “Inspire” activity is required for larger achievements (e.g., Group Micro-Certificates) in which members are expected to create authentic connections with others as they experience the value of having their ideas acknowledged by others, and at the same time seeing themselves as supporting the growth of others.

When you have diverse and multiple types of activities in a platform that has multiple modes of interacting (i.e., connect, grow, apply, review, share, etc.) there is a rich opportunity to leverage know-and-match algorithms, a key value-add of platform infrastructures (see Figure 5). These algorithms can be used to learn and govern the ability of users to make connections, and for

many platform users “living off the feed” recommended by these algorithms is as important as the ‘library’ developed by the designer. For example, music services like Spotify and Apple Music focus more deeply on subscriptions than album sales, and invest in constantly improving algorithms to do a better job of connecting users with songs and playlists designed to interest them. These algorithms get smarter at making connections as they learn by examining which ‘impressions’ in the feed are converted to deeper engagements, and as it learns more about members becomes more effective of making relevant connections (Finn, 2017).

In addition to automated filters, platforms often allow users themselves to rate other users and the services they provide. This rating creates a level of accountability that ostensibly improves the quality of offerings, but also allows high quality and valued products and services to become more apparent. Clearly, platform infrastructures, filtering algorithms, and rating mechanisms are transforming who can contribute value, the quality of offerings, and the connections that can occur in many areas of life. While these platforms have benefits, unfortunately we see few examples of growth frameworks focused on unlocking human potential benefiting from platform advancements and instead only privileging

expert-produced content. Regardless of the type of innovation, it is our core belief that unlocking human potential is not solely the responsibility of those designing innovations to enable it to happen, nor is it the sole responsibility of potentially disenfranchised individuals who are expected to ‘bootstrap their way up.’

Designers have an exciting opportunity to harness powerful ideas and the affordances of platform technologies to create innovations for impact. Importantly, however, one must remember that impact is not a force that an individual or an innovation causes within another, it is a potential realized in partnership with those being impacted who ultimately must own, adapt, and advance. In other words, as discussed earlier, impact is an invitational and non-linear phenomenon, a joint accomplishment, with the designed ‘intervention’ providing one piece of the initial conditions through which the ‘impact ecosystem’ can realize more advanced ways of being and becoming. The challenge is in how our designs share agency and meaning, allowing the player to co-determine structure and impact with our system, with each other and with the contexts of implementation. The model discussed here are in contrast to programs that, even implicitly, treat impact as having occurred when the player acquires the designers’ content or message.



Figure 5. An example feed on a mobile device, with the different types of feed cards and modes that one can engage with them.

In these invitational frameworks, impact is less about how the implementation matches the designer's intent, and instead is how well the design invites facilitators and players to transform their local situation. The core innovation, to be truly transformative, must light a passion and connect the sense of purpose that lives within those to be impacted so that they choose to continually recreate its potential in relation to their local situation in which the core ideas could be transformative. Viewing impact as a shared accomplishment, supported by designers of the innovation, but ultimately realized in partnership with the 'impact-agent' in relation to their ecosystem needs and possibilities, is a shift that requires a belief in the potential of all individuals to realize great things. This level of achievement does not happen in a vacuum, but is a property of a system, requiring that learners as engaged innovators work with skilled facilitators and supportive ecosystems to adapt, apply, and extend the core lessons to local circumstances. Such a perspective has implications for what is being designed, how one conceptualizes the work the design does, and the design processes that is leveraged.

OFFERING TRANSFORMATIONAL GOODS

While we exist in a rapidly changing, digitally connected world with numerous industries being dramatically transformed by these changes, formal education systems are still bound up in traditional learning models looking very much like they did 100 years ago. Most problematically, academic content is still treated as having meaning independent of those situations in which it has value or those individuals doing the learning. This model of learning has typically failed to leverage the motivations of the learner, and in some situations created apathetic, disengaged or recalcitrant individuals who actively undermine their own futures. When we separate content from those contexts in which they create value, a problematic divide between what learning *is* and what learners *can do* is introduced, treating inert concepts, specialized vocabulary, and declarative knowledge as more important than the outcomes they are intended to realize. Even more problematically, such a divide may fail to consider the aspirations, challenges, and agency of the individuals participating in the learning process.

Therefore, in this manuscript an alternative framing was advanced for how we think about unlocking human potential. Platform methodologies and technologies were described with the notion of empowered ecosystems being positioned as a necessary mechanism for scaling

innovations designed to help people thrive. This perspective is grounded in the belief that treats knowledge as fundamentally linked to practice, people as having rich potential, and any designed innovation as just one component – rather than the sole focus – of an empowered ecosystem. More important than the designed innovation was the relevance of the learning activity to what the learner perceives as meaningful. In this way, it is the learner and the enabling ecosystem in which they are functioning that becomes the true innovation, with the designed products and services as responsible for cultivating the agency and supports so that the learner can be successful.

As long as we continue to treat learning as a transactional good in which one can trade in successful content acquisition for a grade or degree as the key value, we undermine the meaning and relevance of that which is being learned. Instead, when one positions content and learning as a transformational good, the focus is on what people are able to accomplish with that which they are learning. This involves an appreciation and commitment to treating the learner and what they are doing as the key "product" of school, with content simply being an enabling resource for the true innovator. It also involves an understanding that each learner's content application focused on use-transformation become the innovation, thereby, treating the learner's actions and consequential outcomes of these as what schools are providing. The power of the school and classroom is bound up not in its ability to transmit abstracted ideas, but rather to empower learners to achieve their goals. Cultivating this type of learning environment requires empowering classrooms to power learners not as dissemination sites but as learning incubators focused on unlocking and amplifying student potential.

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