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El papel de la recontextualización en la ampliación

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Reform Ripples: The Role of Recontextualization in Scaling Up

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Abstract: This paper explores how educational interventions impact the districts they are implemented in above and beyond their intended outcomes. We argue that such unplanned “ripple effects”, in which program elements are recontextualized into other settings, are an important aspect of bringing educational interventions to scale. We analyze these phenomena in one Israeli district in which a teacher leadership and professional learning community initiative has been implemented and rapidly scaled up over the past five years. Extensive longitudinal ethnographic data were collected, including participant-observation in schools, professional development workshops, district management meetings and initiative-related events; 75 interviews with teachers and school and district management; and multiple informal conversations. We identify “ripples” in four arenas, and discuss the importance of individuals as mechanisms for transferring ideas across contexts, the role of ripples in advancing the initiative’s ethos, and the ripples’ long-term sustainability. Our findings suggest more attention should be paid to the impact of educational reforms on meaningful change beyond their original aims and settings. Alongside possible affordances

these ripple effects have in the scaling up process, careful consideration should be given to their latent disadvantages, such as obscuring the program's primary agenda.

Keywords: educational change; educational reform; policy enactment; scaling up; unintended policy outcomes

Cascadas de reforma: El papel de la recontextualización en la ampliación

Resumen: Este documento explora cómo las intervenciones educativas impactan en los distritos en los que se implementan más allá de los resultados previstos. Argumentamos que tales “efecto cascada” (*ripple effects*) no planificados, en los que los elementos del programa se recontextualizan en otros entornos, son un aspecto importante para llevar las intervenciones educativas a escala. Analizamos estos fenómenos en un distrito israelí en el que se implementó y aumentó rápidamente una iniciativa de liderazgo docente y comunidad de aprendizaje profesional en los últimos cinco años. Se recopilaron datos etnográficos longitudinales extensos, incluida la observación participante en las escuelas, talleres de desarrollo profesional, reuniones de gestión del distrito y eventos relacionados con la iniciativa; 75 entrevistas con maestros y administradores de escuelas y distritos; y múltiples conversaciones informales. Identificamos *ripple effects* en cuatro ámbitos y discutimos la importancia de las personas como mecanismos para transferir ideas entre contextos, el papel de las ondas en el avance del espíritu de la iniciativa y la sostenibilidad a largo plazo de las *ripples*. Nuestros hallazgos sugieren que se debe prestar más atención al impacto de las reformas educativas en un cambio significativo más allá de sus objetivos y entornos originales. Además de las posibles ventajas que tienen estos efectos cascadas en el proceso de ampliación, se deben considerar cuidadosamente sus desventajas latentes, como oscurecer la agenda principal del programa.

Palabras-clave: cambio educativo; Reforma educativa; promulgación de políticas; ampliar; resultados de política no deseados

Cascatas de reforma: O papel da recontextualização na ampliação

Resumo: Este artigo explora como as intervenções educacionais impactam os distritos em que são implementadas, acima e além dos resultados pretendidos. Argumentamos que esses “efeitos cascatas” (*ripple effects*) não planejados, nos quais os elementos do programa são recontextualizados em outros ambientes, são um aspecto importante para ampliar as intervenções educacionais. Analisamos esses fenômenos em um distrito israelense no qual uma iniciativa comunitária de liderança de professores e aprendizagem profissional foi implementada e rapidamente ampliada nos últimos cinco anos. Dados etnográficos longitudinais extensos foram coletados, incluindo observação participante em escolas, workshops de desenvolvimento profissional, reuniões de gestão distrital e eventos relacionados à iniciativa; 75 entrevistas com professores e gestão escolar e distrital; e várias conversas informais. Identificamos *ripple effects* em quatro arenas e discutimos a importância dos indivíduos como mecanismos para transferir ideias entre contextos, o papel das ondulações no avanço do etos da iniciativa e a sustentabilidade de longo prazo das *ripples*. Nossas descobertas sugerem que mais atenção deve ser dada ao impacto das reformas educacionais em mudanças significativas além de seus objetivos e configurações originais. Junto com as possíveis possibilidades que esses efeitos em cascata têm no processo de ampliação, uma consideração cuidadosa deve ser dada às suas desvantagens latentes, como obscurecer a agenda principal do programa.

Palavras-chave: mudança educacional; reforma educacional; promulgação de políticas; ampliação; resultados de política não intencionais

Reform Ripples: The Role of Recontextualization in Scaling Up

Toss a rock into a pond. It directly impacts the surface of the water where it strikes. It also sends ripples across the pond. Similarly, when we intervene in an educational system, we directly impact the practice that is the target of our intervention, and also send ripples across the system. Typically, we focus on the former, direct effects of our work, leaving these ripple effects largely unexplored and unreported. In this article we investigate these reform ripples, arguing that they are a potentially important and inseparable element in the process of scaling up educational interventions.

We are currently in the fifth year of a large design-based implementation study, designed to foster pedagogical discourse and teacher leadership in Israeli schools. The study was initially enacted in four schools in the first year, but was designed to be scaled-up rapidly, to 29 schools in the second year, 50 additional schools in the program's third year, and a total of 101 schools in the fifth year. This scaling up process has been challenging, but alongside the difficulties involved in disseminating the original design, we have noticed an interesting grassroots phenomenon, termed "ripple effects" by the district personnel leading the program

These unintended ripple effects are cases in which elements of the reform, including tools, practices, ideas, and approaches, have been recontextualized and adapted for use in settings other than those included in the core aims of the reforms. Reflecting on these phenomena has led us to rethink issues of scale and scaling up processes, and their practical implications. In this paper we address two central questions: What conditions enable and shape 'reform ripples'? And what are their affordances and constraints for scaling up processes?

Theoretical Perspectives

The Challenges of Scaling up Educational Initiatives

While numerous reforms and educational initiatives have demonstrated their effectiveness in small-scale pilot studies, scaling up successful projects has proven to be a stubborn challenge (Datnow, 2005; Elias et al. 2003; Elmore, 1996; Fullan, 2016; Sanders, 2012). Scaling up is the process of expanding the enactment of programs or interventions that were trialed in a few sites (for instance, in a few classrooms or schools) to a wider scope (for instance, from 1-2 classrooms to a whole school, or from one school to a district). Traditionally, policy-makers and researchers have approached scaling up with the expectation that small-scale programs can be straightforwardly replicated across multiple settings (Elmore, 1996).

These approaches have been criticized for over-simplifying the complexities of working at scale, and for their quantitative orientation, leading researchers to also consider qualitative factors such as practitioner learning and reasoning, rather than merely assessing the extent to which they have successfully followed a recipe (Elmore, 2016; Fullan, 2016).

Researchers have criticized the idea of replicating "best practice" both in the instructional (Lefstein & Snell, 2014) and policy spheres (Elmore, 2016; Klingner et al., 2013). In both contexts expecting practitioners to adhere to an "instruction manual" diminishes the complexities of the education field by expecting the intact transfer of ideas and practices throughout the system.

Berman and McLaughlin (1978) offered an alternative view of reform implementation as a process of mutual adaptation, in which both the reformer and the implementers change the program as it moves into and is adapted to meet new contexts. Datnow and colleagues (2002) advanced and extended this approach, which they termed "co-construction", in order to understand the variations in implementation that both researchers and policymakers observed. Dede (2015) applied this idea of mutual adaptation to the issue of scaling up, arguing that "in education, scale is not about adopting innovations with complete fidelity to their initial setting, but instead adapting them to

variations in students, teachers, and settings, simultaneously creating their conditions for success to the extent locally possible” (p. x).

In an attempt to construct a framework for understanding scaling up as a complex process rather than merely the replication of small-scale programs in multiple sites, Coburn (2003) suggested four interrelated dimensions of scale. The first dimension is the depth of the scaling up, meaning change that “goes beyond surface structures or procedures...to alter teachers’ beliefs, norms of social interaction, and pedagogical principles as enacted in the curriculum” (Coburn, 2003, p.4). The second dimension is the sustainability of the program and the persistence of change in schools and classrooms over time. The third dimension involves the spread of the program, the common sense of “scaling up”: the expansion of activities and structures, as well as the dissemination of beliefs, norms and principles, to more schools and teachers. The final dimension refers to ownership of the program, highlighting a shift from an external reform controlled and executed by outside agencies, towards internal control by districts, schools and teachers with the capacity to implement and manage the reform independently.

These dimensions examine scaling up from a broad point of view, beyond the number of classrooms and schools that the reform has reached. Dede (2006) suggested adding a fifth dimension, “evolution”, according to which the practitioners’ adaptation of the innovation reshapes the designers’ thinking about it, thus evolving it. This aspect of scaling up logically follows from the idea of mutual adaptation discussed above: expanding innovations into new contexts necessarily involves adapting them to these contexts’ unique circumstances.

Coburn (2003) and Dede’s (2006) dimensions are aspects of intended program enactments, including their spread to targeted sites, local ownership over them, their sustainability and depth. These conceptions of scale were expanded by Morel and colleagues (2019) to encompass a typology which allows for a dynamic and polysemic view of scale. Their typology includes four conceptualizations of scale: adoption, replication, adaptation and reinvention. The final conceptualization suggests viewing the scaling up process as involving “intentional and systematic experimentation with an innovation.” (p. 372).

Here we argue for a further expansion of Coburn’s, Dede’s, and Morel and colleagues’ frameworks, to include examination of unintended enactments - practices that occur outside the program’s designated setting or beyond its target audience.

Intended and Unintended Impacts of Reforms

Educational interventions have both intended and unintended manifestations in the systems in which they are enacted (Heck, 2004; Tanguay, 2020). Uncovering unintended and/or unanticipated effects is critical for fully understanding reform enactment and scaling up processes. The public policy literature on unintended consequences emphasizes the distinction between unintended and unanticipated policy outcomes (6, 2012; de Zwart, 2015; Margetts & Hood, 2012), though many researchers use the two synonymously (de Zwart, 2015). For example, de Zwart (2015) argued that the many unintended consequences of performance management practices, such as hindering innovation, the growth of internal bureaucracy, and tunnel vision, while indeed unwelcome, can be readily anticipated given the academic literature on performance management. de Zwart (2015) noted that one of the reasons for using the term “unintended” to include unanticipated effects “...is linguistic convenience. ‘Unintended’ has a rhetorical advantage over unanticipated because it is semantically closer to ‘unwanted’ and almost all studies about ‘unintended consequences’ today are about the unwanted side-effects of policy” (p. 291). Margetts and Hood (2012) noted the methodological concern of establishing intention or anticipation in retrospect,

advising caution when deciding what is a case of unintended or unanticipated consequences especially with regards to the different players and stakeholders involved.

In scaling up reforms, unintended consequences can occur both in the sphere of the program's intended audience and settings, and with regard to unintended activities that take place at their periphery. It is important to find a balance between these core and peripheral activities, in terms of the resources the activities require, and the flexibility the reform is willing to accommodate to its original and intended aims, principles, and tools. Thompson and Wiliam (2008) presented a framework that addresses this flexibility when designing a professional development program for supporting teachers in their use of formative assessment. They warned policy-makers about being overly flexible with programs' central principles, leading to "lethal mutations" (Brown & Campione, 1996) that negate the program's core aims. Such was the case, they claimed, in the U.S. Effective Schools movement in the 1980's and 1990's (Cuban, 1998). On the other hand, programs that are not flexible can achieve only limited scale, as is the case, for example, with Montessori schools, which refuse to compromise (Thompson & Wiliam, 2008).

Recontextualization

This paper seeks to extend our inquiry into scaling up processes to include exploration of "reform ripples", i.e. the unintended recontextualization of reform ideas, tools and activities, which were not originally part of the planned scaling up process, but are not necessarily "unwanted side-effects" either. Our use of *recontextualization* builds on Bernstein's (1990, 1996) examination of how agents develop and appropriate discursive resources taken from one social context and applied in another. He showed that an idea that is imported from one context to another may seem unaltered but is subject to recontextualizing rules and therefore likely changes its original meaning.

Bernstein (1990) demonstrated this idea with the example of physics as a secondary school subject that is transformed in its recontextualization from scientific research into schools through principles that are social and pedagogical, rather than disciplinary. Consequently, what counts as physics in school is different from what counts as physics in the academy. For example, in the academy, researchers use experiments to explore new hypotheses. In their recontextualization into the school physics curriculum, experiments are used as a means of demonstrating physical principles.

Building on Bernstein (1996), we view the transfer of reform resources to contexts that are peripheral to the reform's targeted core aims and audiences as processes of recontextualization, which potentially involve altered meaning and unintended effects. These altered meanings of recontextualized practices are set by the new context into which the ideas "ripple", rather than by the reform context from which they originated.

In so doing, we build upon Tabak's (2004) call for researchers to broaden their analytic scope by attending to both exogenous and endogenous designs in design-based research. Exogenous designs are the materials developed by the researchers, or other outsiders to the setting, for the purpose of the research; endogenous designs are the materials that were in place in the local setting, or that were "devised by the local participants 'in-action' as part of the enactment" (p. 227). Tabak emphasizes that design-based researchers tend to focus exclusively on their own, exogenous designs, and thereby overlook potentially productive insights that endogenous designs can offer. Tabak's (2004) caution is fitting not only in classroom-level, design-based research, but also in district-wide design-based implementation projects such as our own work, or in the enactment of reforms more generally.

Study Context: The “Leading Teachers” Initiative

At the center of this study is a nationwide educational initiative that aims to promote teacher on-the-job professional development through collaborative inquiry into practice in teacher team meetings. Our research team collaborated with a large Israeli school district (approximately 650 schools in 54 local authorities) over the course of six years. Initially we worked with senior administrators, investigating how they and their teachers think and talk about pedagogy, and then subsequently launched together a program for the development of teacher leadership and pedagogical inquiry as means to improve teaching. The partnership aims to support teacher collaborative, critical inquiry into problems of teaching practice facilitated by leading teachers in weekly in-school meetings. The leading teachers participate in bi-weekly regional workshops, which provide them with tools for fostering and enhancing pedagogical discourse in their in-school meetings, and receive one-on-one coaching. Professional development at all levels (including leading teachers, principals, workshop facilitators and coaches) is focused on collaborative, reflective and critical inquiry into problems of practice.

Team discussions are expected to revolve around rich representations of classroom practice (such as video-recorded lessons or student work). Teacher leaders are encouraged to facilitate inquiry processes through the use of conversational protocols developed by the initiative and featured prominently in the professional development processes.

Our research team was part of the research-practice-partnership that developed and implemented the initiative and was involved in a large design-based implementation research study exploring different aspects of the implementation. Hence, in addition to our role as researchers, team members also took on supportive roles in implementing the initiative such as co-designing and co-facilitating professional development workshops (alongside district coaches), coaching teacher leaders, and consulting district management. It is primarily through these roles that we became aware of the ripple phenomena at the center of this study.

Methods

The current study is based on data derived from a larger design-based implementation research project. This paper focuses on one district in which the initiative has been implemented gradually over the past six years. In the second year of the program, District leaders began to tell us about instances of “ripples” (often using that metaphor) in which the reform was having an impact on activities and structures across the district, which we had not targeted as part of our efforts. At first, we dismissed these phenomena as marginal, and even a distraction, but over time have come to recognize their importance to the district and efforts to scale up the program. We began to examine these processes, through systematic analysis of longitudinal data we had collected, and through the conduct of interviews dedicated to the issue.

Our methodological approach is based on Agar’s (2006) notion of “rich points” within ethnographic research:

...the purpose of ethnography is to go forth into the world, find and experience rich points, and then take them seriously as a signal of a difference between what you know and what you need to learn to understand and explain what just happened. (p. 11)

These “ripples” – unintended (and often unanticipated) enactments of the initiative – were valued by our practitioner partners but initially seemed to us insignificant and even distractions.

Over time, however, we learned to appreciate them as potential “rich points” that compel us to confront the gaps in our understanding.

Data Sources

Over the course of the initiative’s implementation in the district, we collected and analysed a wide range of data sources, which we introduce in the following sections. It is important to note that since the goal of the initiative was to change teachers’ professional development, our team primarily collected data relevant to that aim, namely, recordings and fieldnotes from professional development workshops, teacher team meetings, and district management meetings, rather than data on classroom practice. The following sections depict the range of data sources that constituted our initial data set. From this corpus, through a multi-phase analysis process that will be described below, we constructed a narrower data set of “ripple” cases.

Data Source 1: School Observations

The research team conducted longitudinal ethnographic study of several schools in the district. Data collection focused on observing and recording in-school team meetings, and the researchers also participated in and documented other school-related events. To date we have recorded 424 team meetings in 81 teams in 29 schools. Each year we approached the schools in the initiative and requested their consent to participate in our research. Our sampling strategy was to include as many schools as possible, dependent on their cooperation and logistical considerations (e.g., we were not able to visit some schools due to scheduling issues).

In the participating schools, the researchers primarily observed team meetings and school events. In schools in which we developed particularly good rapport with our practitioner partners we were also invited to participate in and observe events above and beyond these formal initiative foci, thereby exposing us to initiative ripples at the school level.

Data Source 2: Participant-Observation in District-Wide Workshops and Meetings

In partnership with district coaches and supervisors, research team members facilitated professional development workshops, giving us the opportunity to view and record the initiative’s implementation in these professional development contexts. Each year several workshops were conducted, ranging in duration from 30 to 60 hours each. In addition, we participated in and observed bi-monthly district management meetings and many initiative-related events. All events and meetings were audio-recorded.

Data Source 3: Interviews

The research team conducted 75 formal interviews and multiple informal conversations with teachers, principals and district administrators. Eight of these interviews specifically targeted the reform ripples phenomenon with questions such as “You have mentioned numerous times that the program has made ripples across district activities – what do you mean by that? Can you give me some examples?”; “Have you noticed instances of the use of the “Leading Teachers” initiative’s ideas, principles or tools outside of the initiative? Could you describe them?”

The other 67 interviews our team conducted were more generally about the initiative and its enactment. The research team interviewed teachers, principals, and district management on various aspects of the initiative throughout the years of its implementation. These general interviews helped us understand the reform context and the challenges of scaling up, which constituted the backdrop for making sense of the ripples case studies.

Data Analysis

Based on the research team's ethnographic knowledge of and involvement with the management of the reform, together with suggestions from district leaders, we identified 19 instances in which the initiative design was endogenously recontextualized. From these instances we constructed detailed written cases from the data sources specified above. The cases we assembled described the background and chain of events that led to the recontextualization and related details. The cases were assembled by holistically reviewing the data pertinent to each instance and highlighting the relevant information from the various data sources. This study analyzes these cases that depict processes whereby the reform's ideas, practices and tools are enacted in unintended contexts through several phases.

We began our multi-phased data analysis process by first examining the scaling up process of the "Leading Teachers" initiative according to Coburn's (2003) four dimensions of scale: depth, sustainability, spread, and ownership. Next, with the assistance of District management involved in the initiative, we identified cases of "reform ripples" throughout the data. With Coburn's framework in mind, we discussed these cases within the research team vis-à-vis Coburn's four dimensions of scale, and the extent to which these ripples align with the initiative's core principles.

Each of the cases we identified we explored vis-à-vis its context, actors involved, their aims, similarities and differences between the recontextualization and original design, conditions that enabled and shaped the recontextualization, and its perceived impact. Finally, these facets were also examined collectively in order to glean understanding of recontextualization processes and mechanisms and their possible affordances and constraints for scaling up processes.

Findings

Examination of our data corpus – the cases exemplifying "ripples" that were recognized by our research team and key district personnel - revealed that these cases may be organized according to four arenas of unintended effects: (1) Professional development in various district units; (2) District-wide coaching practices; (3) School-community initiatives, and (4) District supervision of schools.

Before we present cases of the "reform ripples" we identified within each arena, we first depict our direct scaling up strategy and analyze it in light of Coburn's (2003) four dimensions, in order to show how recontextualization completes our understanding of those (direct) scaling up efforts. Next, to illustrate ways in which elements of the initiative are enacted differently than planned by the initiative's designers, we present brief examples from each arena.

Scaling Up the "Leading Teachers" Initiative

The initiative at the center of this study, the "Leading Teachers" initiative, was designed to scale up very rapidly: 100 schools within five years (300 leading teachers). In order to accomplish this rapid expansion, program design principles include relying predominantly on local resources for professional development and for managing the program, and focusing our efforts on capacity-building at multiple levels, including the leading teachers, coaches, workshop facilitators, principals, and district management team. The district is responsible for the day-to-day administration of the project, training and coaching leading teachers and school principals, and recruiting and selecting new participants. Within the schools, the principals and leading teachers are responsible for enactment, having autonomy to set their own goals, focus and agenda, and select which of the program tools – if any – to use. The research team is responsible for documenting activity, leading the development of the program, training and supporting district coaches and workshop facilitators,

and advising school and district leaders. Gradually, the district's responsibility is expanding as the research team phases out our involvement, remaining only in an advisory role.

We have collaborated with our district partners in the development of the program design, promoting their capacity to enact the program at scale as well as their sense of ownership. In order to facilitate local enactment, we have reified the program principles in a series of practical and conceptual tools, co-developed with our district partners. Chief among these tools are protocols for discussing video-recorded lesson excerpts, analyzing student work and conducting consultations. These tools were distributed in a program handbook, initially published at the end of the first development year, which includes materials and tools developed collaboratively by practitioners and researchers. This handbook has been revised and expanded over time, and distributed widely. It has been complemented by a library of classroom video clips, a handbook for coaches, research briefs and a web-log.

Coburn's (2003) four dimensions address key issues we have struggled with during this scaling up process. The rapid *spread* of the initiative throughout the district placed heavy demands on the district and our capacity to provide quality support to schools and leading teachers, thereby jeopardizing the *depth* of program implementation. Indications about partial and superficial enactment led us to focus our efforts narrowly on the core activities of the initiative, and to avoid peripheral activities that are not directly related to them. To encourage the *sustainability* of the initiative, we sought to rely on local resources for professional development and for managing the program, building the district's capacity to lead and enact the initiative. This strategy also facilitated a sense of *ownership* over the initiative by district management and teachers, leading to appropriation of tools at the core of the initiative (Segal et al., 2018), as well as independent initiative-inspired activities at its periphery.

All this is easier said than done. Scaling up the program in the district required us to scale up research team capacities, leading to compromises vis-à-vis quality (with implications for depth). We encountered significant cultural and organizational challenges. Existing professional development institutions undermined the program's work-embedded, inquiry-oriented approach. Maintaining weekly two-hour teacher meetings in school schedules proved to be a persistent challenge, especially as school and local leaders' attention turned elsewhere. The more the initiative spread, the more difficult it was to address these challenges, and maintain depth, sustainability, and ownership.

Examining the scaling up of this initiative through Coburn's (2003) dimensions emphasizes the direct, intended actions and activities of the initiative. Yet, a non-negligible part of the activities that have taken place in the district throughout the years were unintended (by us), and peripheral to the initiative's focus. Analysis of scaling up processes according to Coburn's dimensions may overlook these activities. Identifying and analyzing these unintended ripple effects might aid policy-makers to understand what is being implemented, how practitioners at various levels of the district perceive the initiative, and aid in bridging the gap between policy-makers' conceptions of the initiative's core, and practitioners' appropriations and adaptations of the program.

The following are brief examples from the four main arenas of ripples we identified:

Arena (1): Professional Development in Various District Units

The first arena we identified is the initiative's effect on the professional development of various district units by their selective adoption, adaptation and use of initiative concepts. The initiatives' unique concepts (for instance "representation of practice" and "issues" at the center of discussions) and tools (for instance the consultancy protocol) spread throughout the district to numerous settings, including in non-initiative-related professional development workshops and District-wide learning days for supervisors and senior coaches. The learning days were organized by

the same unit that was responsible for the initiative within the district head office, and many of the workshops were facilitated by senior coaches who participated in the development team in the initiative's first year.

For instance, in district-wide learning days supervisors examined student work using a consultancy protocol, one of the main tools the initiative offers teachers for conducting inquiry-oriented discussions. Another example is a conference organized by the district senior mathematics coach for the 250 school math coordinators under her responsibility. One of the conference sessions involved joint observation of a lesson and reflective discussion in a team of teachers structured around an initiative protocol, a practice heretofore not used in such settings. The district's senior mathematics coach summarized the conference on social media:

Today, a learning meeting was held for the coordinators of mathematics in the elementary schools in the District, on the subject of "Mathematics for all"...

Over 250 math coordinators in Central District elementary schools.

The session included watching a live math class followed by pedagogical discourse with a panel of math coordinators, watching peer classes is an opportunity to step outside of personal thinking patterns, see more options and discover more ways to teach.

In this excerpt, the senior coach is using a term that is heavily used in the initiative ("pedagogical discourse") though she does not mention the initiative directly. This supervisor was part of the first cohort of practitioners who worked with us in developing the initiative in its first year. The conversational protocol from the booklet the initiative produced was distributed to all the teachers at the conference, underscoring how this activity was based on the senior coach's experience with the initiative's tools and principles, adapted to her own interpretation and professional development context.

Another example of a ripple in this arena is the case of school social coordinators. Ella, the district supervisor responsible for these coordinators, decided to invite to the initiative's professional development workshop coordinators whose schools were not taking part in the program. She heard about the initiative through her colleague, the district manager of the initiative, at one of the supervisors' learning days. Ella turned to her with the idea to create teams that discuss topics related to social education, led by leading teachers who were social coordinators. Ella recruited several interested teachers, and convinced their principals of the benefits of this opportunity, which accrues supplementary resources to the school (primarily, compensation for leading teachers). When asked why she decided to join the initiative though her field of responsibility wasn't within the original scope of the initiative, she explained:

Why did I believe in this story of leading teachers in social education? Basically, I said, the leading teacher provides two hours a week, the program provides two hours a week for the staff. I came to [the initiative's District management] and I said, if you approve of this special pilot for me, we allow these schools two hours of a team that talks and thinks about how we advance social and community values within the school...I gave this team an option to include a representative from the informal education department, I gave the option to include the manager responsible of volunteering in the local municipality to join the team, beyond the school staff...the sky is the limit, everything is open.

These examples of district units that were not part of the initiative's target audience adopting program principles and concepts demonstrates a recontextualization that involves a spread of initiative ideas to unintended and unanticipated contexts. The teams Ella formed and the teachers she recruited discuss topics related to social education, and how to advance these topics throughout the school. This is a different goal than the original goal of the initiative which focused on advancing teachers' learning through elaborating on their problems-of-practice. At the district learning days the participants observed how a team could use a protocol to advance their learning, but instead of an inquiry-oriented discussion (in line with the initiative's goals) the discussion centered on feedback on the lesson.

This varying recontextualization of concepts and tools is similar to Grossman, Smagorinski and Valecia's (1999) differentiation among five degrees of appropriation (lack of, label, surface features, conceptual underpinning, and achieving mastery) each representing a depth of understanding of the tool's function. For example, in the case of the social education coordinators, we can see appropriation of surface features without adopting their conceptual underpinnings.

Alongside the varying degrees of recontextualization of initiative concepts and tools evident from these examples, the examples also convey the centrality of the people involved in the enactment of these ripple effects. In the ripples we identified in this arena, the people involved were key actors in the initiative or had direct engagement with its key actors. This phenomenon recurs in the following arenas as well.

Arena (2): District-Wide Coaching Practices

A case illustrating the initiative's effect on the second arena is the recontextualization, adaptation and elaboration of key initiative ideas by Dina, the district senior language arts coach in her work training and supervising language arts coaches. Dina worked as a coach in one of the initiative's pilot schools, and in the middle of that year was promoted to be the senior language arts coach for the district.

Among other ideas, Dina re-oriented her work with the coaches to centre around rich representations of classroom practice, adopted the code of ethics used in the initiative when viewing video-recordings, and adapted a conversational protocol for analyzing video-recorded lessons. In a conference organized by the initiative she was asked to present her enactment of the initiative's principles and tools, and she introduced herself:

My name is Dina, I am a senior Language Arts coach in the District. I was a partner in the development and thinking group about four years ago, when we did not really know where we were going, but over the years I took pedagogical discourse principles and ideas and tools into the field of language education. As part of my role as a District coach I come to schools that have a coach, and we have built a kind of agenda that includes watching a lesson, and then a pedagogical conversation following the observation. In some schools I am the one who actually leads the discussion.

Following this introduction in which she orients the audience to her position in the district, her affiliation with the initiative, and the way she uses the tools in her context, she goes ahead to describe such a school visit in detail. In this description she used the key terms from the initiative and emphasized the affordances of the initiative tools. However, she integrated these conceptual and practical tools within existing disciplinary frameworks promoted by the Ministry of Education, such as a rubric for assessing language arts lessons. Consequently, her recontextualization of the initiative

tools involved adapting them for the advancement of a different philosophy from that of the initiative. Whereas our work, including the protocol in question, is oriented toward problems of practice and dilemmas, the adapted tool took on a “best practice” orientation, primarily assessing the lesson according to its adherence to official prescriptions.

This case represents a recontextualization of initiative principles to coaches’ practices resulting from Dina’s strong personal commitment to the initiative, though mixing some of its principles with those of official language arts education policy. Dina’s involvement in the initiative’s development from its inception afforded her a sense of ownership of initiative ideas and tools, and the agency to adapt them to her own purposes and perceived needs.

Arena (3): School-Community Events

Following cases from two arenas at the district level, we turn to the school level. Exemplifying the third arena is a case that involves a regional student council event, hosted by one of the first schools to join the initiative. Several teachers decided that one of the initiative’s tools, a conversational protocol used at teacher team meetings, could be usefully employed in discussions at the event. They exposed the school’s student council representatives to it, and the tool was used during the event itself. The protocol, attached to a key-chain, was distributed to student representatives from area schools not affiliated with the initiative. This activity was repeated in the following year.

Another example of an instance of the initiative’s effect on school-community events includes a case in which teachers decided to use initiative tools for analyzing student work in parent-teacher meetings in order to help recruit the parents to engage productively with their children’s learning.

In both of these instances the initiative’s core tool, intended to be used in teachers’ team meetings – the protocol - was adapted to be utilized in a different setting, with students and parents as participants. Similar to its original purpose, the tool was recontextualized and used to advance an inquiry-oriented discourse to unintended participants. These recontextualizations convey local ownership and appropriation of initiative’s tools, yet are unsystematic and are not typically sustained, in part because they involve individuals initiating one-off events rather than systemic functions.

Arena (4): District Supervision in Schools

Tammy, who served as district coordinator of the initiative in its first year, described how her visits to schools have changed on account of her involvement in the initiative. Previously Tammy passively observed school activities, and then gave feedback to the teachers and principal. Now, following her involvement with the initiative, Tammy organizes school visits around an inquiry-oriented discussion about one of the issues selected by the teacher, after she and the principal identify issues of interest and evidence for what they observed. She explains:

I have adopted the work with the protocols and the main principles in general of the discourse [the initiative]... in all our learning days. Every day that I am in the field I visit two schools. In every school, it is mandatory to enter a classroom to observe. I require a principal and two other staff members [to join], often a coach joins me, too...at the end of every observation I require observation sheets.

Thus, Tammy implements the initiative’s principle of opening the classroom door, using representations (in this case the lesson itself), and using protocols with the aim of improving

teaching. Yet, her addition of “observation sheets” was her unique adaptation of the protocol used in the initiative.

The second district coordinator responsible for the initiative was also appointed to a supervisor role, as were two principals who brought the initiative into their schools and were viewed as leading proponents of it. These appointments essentially led to the emergence of new models for school visits in multiple sites across the district. The new supervisors are integrating initiative principles, such as evidence-based and inquiry-oriented discussions, into supervision practices in schools.

This example of a change in practices that are outside the targeted practices the initiative aimed to change involves the supervisors’ recontextualization of initiative principles and practices into their supervisory duties, in accordance with their appreciation of and identification with the initiative – and perhaps also as a way of garnering favor with the district superintendent.

Discussion

The core intended activities of the initiative and its scaling up process analyzed according to Coburn’s (2003) dimensions highlight ongoing concerns with issues of *depth* of engagement and enactment, *sustainability* and *ownership*, as we and our district partners have *spread* the initiative to more than 100 schools across the district. The cases we identified as “ripples” add a new dimension to those discussed by Coburn (2003): the unsolicited *recontextualization* of program elements to different settings. The recontextualizations we identified go beyond the enactment of reform ideas in their intended field, extending to the appropriation of ideas and tools to areas that are not part of the reform’s original agenda. Here we discuss the processes and mechanisms that enable these recontextualizations, and their advantages and disadvantages for the reform in general and for scaling up processes in particular. We conclude with our main findings on recontextualization processes that may aid policymakers and researchers when considering, planning, implementing, and examining scaling up processes.

Mechanisms of Ripples within Policy Enactment

In many of the cases we identified, the main mechanism that facilitated the ripple effect was the movement of key actors into new positions and roles. The initiative enjoys high status in the district and participating in it is deemed prestigious. Furthermore, participants in the initiative occasionally get to perform in front of leading district personnel and receive recognition for their successful implementation. This led to the promotion of many initiative-affiliated leading teachers, coaches, and principals throughout the district (including to posts outside of the initiative), which turned out to be a critical catalyst for reform ripples. Many of these individuals are deeply committed to the initiative’s ideas and principles from its inception, and had a key role in its development from the first pilot year and through its gradual scaling up. The case we presented above, involving Dina, the senior language arts coach, is an example of such a promotion. Her promotion to the senior coach position was assisted by her high-profile role in the initiative, and she in turn brought initiative ideas to her new position. Similarly, in the pilot school in which Dina worked, two leading teachers have been appointed to principal roles, while another two lead district professional development processes.

Our study shows that one of the common threads in the cases presented above is the critical importance of individuals’ initiative-related background in enacting ripples. This finding is in line with previous studies which highlighted the role of individuals in scaling up reforms (Ahmann, 2015), and the role of networks in policy-making and implementation (Viseu & Carvalho, 2018).

In his seminal work Weick (1976) claimed that schools are loosely coupled organizations, with little interaction among teachers, between and in schools, and virtually no impact on each other. This has the advantage that failed innovations are contained, but at the same time the diffusion of good ideas is forestalled. The district we studied is a large, loosely coupled system in which leaders such as principals and supervisors enjoy a high degree of autonomy, and are in a position to decide and enact on their own adaptations to the initiative. This organizational structure which affords autonomy of the educational system's leaders' activities enables the appearance of independent reform ripples enacted by such individuals alongside the scaling up process.

Another mechanism that facilitated ripples in different parts of the district is related to the resources that are attached to the initiative's implementation. In addition to the strong leadership of the district superintendent, district staff were attracted to the initiative as a way to maximize resource allocation to their unit. Enacting ripples was a way of being seen as part of the initiative effort and thereby worthy of further investment. In the process of going to scale more and more individuals in the district heard about the initiative and were attracted to its promise (both in terms of resources and its content), leading to their attempts to be affiliated with the initiative.

Alongside the coveted resources the district allocated to initiative-affiliated schools and activities, the research team was also viewed as a resource that could potentially benefit initiative-affiliated staff at all levels. Even in cases in which district staff were not impressed by researchers' advice or feedback, working with researchers was seen as prestigious association. In the initial stages of the initiative implementation the research team was intensely involved in many aspects of the initiative, but as the scaling up process progressed, the team could not reach all the schools, and its involvement was necessarily less intense. This created a situation in which the areas in the district that the team was engaged with received a limited and (often) desirable resource.

The cases we identified suggest a link between the instances of recontextualization of initiative ideas and tools and the initiative-related background of individuals who enact them. Furthermore, the cases suggest a link between the background of these individuals and the depth of their enactments. For instance Dina, the district coach described in Arena 2 (District-Wide Coaching Practices) and Tammy, the district supervisor described in Arena 4 (District Supervision in Schools) above were part of the first co-design team of the initiative, and developed a strong commitment to initiative ideas and principles. Likewise, the use of initiative principles in the student-council meeting described in Arena 3 (School-Community Events) was led by leading teachers who were also facilitators at initiative-related professional development workshops.

Thus, many of the individuals who enact ripples have deep roots in the initiative from its early stages of implementation, before going to scale. This finding resonates with Johnson and Chrispeels (2010) emphasis on the essential relational and ideological linkage between central office leaders, principals, and school leadership teams for initiating and sustaining reform. Sanders (2012) also found that the positive relationships between the reform leaders and key actors within the districts helped to explain variations in their success in scaling up. In scaling up processes, the human factor is critical. Each individual has their own understanding of the reform's principles and tools, leading to varying degrees of appropriation (Grossman et al., 1999), each in their own jurisdiction.

Relying on individuals for scaling up is problematic since the process "may also require strategies to develop local conditions and norms that support innovation." (Morel et al., 2019, p. 374). Our findings reiterate this precarious mechanism and suggest that the tension between individual enactments and the reform's core should be considered when going to scale, developing systemic ways to deal with this tension beyond supporting individual innovation.

Implications for Policy and Practice: Ripples Enhance and Impede Scaling Up Processes

Coburn (2003) argues that “to be ‘at scale’, reforms must effect deep and consequential change in classroom practice ...change that goes beyond surface structures or procedures” (p. 4). We might add: being “at scale” is facilitated by deeply affecting district culture. Ripples, even superficial ones, may enhance this effect by generating symbolic momentum that can facilitate scaling up, for example by making school and coach recruitment easier, because the initiative is perceived as positive, and central to what the district does. On the other hand, ripples may also impede scaling up processes by diverting scant resources and reinforcing a superficial culture in which ideas are more often paid lip service than acted upon. For instance, Dina, the district coach described in Arena 2 (District-Wide Coaching Practices) enacted a relatively sustainable ripple which involved shifts in the conventional language arts coaching practices in the district. However, her enactment deviated in important ways from the initiative’s professional development approach; though note that Dina’s and our views of this issue differ. Thus, at least from our perspective, this unintended ripple captures well the spread vs. depth dilemma.

Recontextualization and Cultural Change

At the beginning of the research-practice partnership the district called for district-wide embrace of the initiative ideas, while the research team was in favor of limiting the initiative’s spread, especially in the initial years, in order to concentrate on depth and quality. Accordingly, the official, core activities of the initiative were indeed limited, but from the standpoint of the district, the unintended ripples described in this paper were actually seen as welcomed, intended outcomes of the initiative. This complexity of how the perspective of the research team and the practitioners changes the definition of the ripples as intended or unintended outcomes of the initiative is related to the understanding of what is included in the cultural change which is at the heart of the initiative.

One of the reasons the district management leaned toward making the initiative ‘about everything’ was to create a common language and ethos, a kind of “snowball effect” in order to engage and enthuse teachers to come on board. This strategy is aligned with Senge’s (1990) explanation on how a learning organization’s shared vision is achieved:

Visions spread because of a reinforcing process of increasing clarity, enthusiasm, communication and commitment. As people talk, the vision grows clearer, enthusiasm for its benefits build. And soon, the vision starts to spread in a reinforcing spiral of communication and excitement. (p. 227)

One of the aims of the initiative is to change teacher discourse and promote teacher leadership as part of a more general cultural change (see Rincón-Gallardo, 2016 for a detailed account of a scaling up process of a pedagogical initiative that involves cultural change). Creating a common language and ethos are important elements of this cultural change, although both may be enacted superficially. Many of the ripples we identified are activities that are part of this intended shift in district culture, as many people wanted to participate in and influence the initiative and the ethos it introduced. The research team, however, was wary of spreading the initiative’s resources too thin, and actively isolated activities that were not part of the initiative’s core by insisting on allocating resources and attention to a limited number of focal points.

Our experience in the field shows that the former approach of spreading the initiative as much as possible, even at the expense of the depth of the enactment, has a cost. When a school enacts the initiative’s tools without depth, it may be difficult to rectify – the staff perceive themselves as acting upon initiative ideas and do not recognize their superficial enactment. Another

danger of this approach is the increased possibility of encouraging an initiative ethos that is based on lip-service and not true to initiative principles. Nonetheless, ripples, even superficial ones, are part of a cultural change, and give the people who enact them the opportunity of being involved in and impacting a central district strategy. It seems that regardless of the fidelity of the ripple to the reform's principles and tools, recontextualizations tend to promote the ethos of the reform and add to the inertia for its enactment and development. This mechanism stems in part from the ripple's visibility and has both affordances and constraints for the initiative's scaling up. Enacting ripples demonstrates an affiliation with the reform, and even if their enactment is mere "appropriation of a label" (Grossman et al., 1999), it may ultimately contribute to the formation of common language, identification and cultural ethos across the district.

Recontextualization, the Dilemma of Spread vs. Depth, and Reform Sustainability

This second finding emphasizes the dilemma policymakers have when scaling up reforms: how should they balance spread and depth? Brown and Campione (1996) cautioned policy-makers from being too flexible with their programs' central principles leading to the risk of a "lethal mutation" that negates reform aims. They suggested finding a balance between this exaggerated flexibility and a completely rigid agenda that refuses to compromise and consequently does not allow for scaling up.

Ripples have the potential to facilitate reform ethos as they spread throughout the district, but also may obscure its core principles by being too flexible, potentially leading to lethal mutations that do not advance the reform's goals. Thus, recontextualization embodies policy-makers' breadth-depth dilemma. Identifying these ripples, as well as their benefits and downsides, may aid policy-makers when deciding on their resource allocation and scaling up strategy. Policy-makers may decide to institutionalize certain ripples into the mainstream of the reform, collaborating with the ripple enactors to engage in deeper ripples, and to include them into the reform's core activities, creating another route to reform spread.

Institutionalizing ripples could be viewed as an "evolution" of the initiative (Dede, 2006) in which its adaptation in the field reshapes the planners' thinking about it. Dede (2006) explained the need for such an approach in order to decrease resistance to change, both on the individual level and the organizational one, emphasizing the difference between conducting systemic reform and scaling up a single initiative. By giving both the individual and the organization the opportunity to change the initiative according to its context, the initiative increases the probability for its successful scaling up (Dede, 2006). Changing the initiative by embracing ripples into its core, could aid its leaders in the scaling up efforts, and provide a way to enhance the depth of their enactments.

Another key challenge facing policy-makers is reform sustainability (e.g., Coburn, 2003; Datnow, 2005). Many of the ripples we identified relied on individuals' entrepreneurial activity, rather than being part of systemic organizational functions. Thus, when people change their priorities, or change their position, the ripple is discontinued. For instance, the student council school-community event (Arena 3) was the effort of a few teachers from one of the stronger district schools. The event was carried out twice, but each year its continuation and adherence to initiative principles was dependent upon the particular teachers involved. The examples mentioned in Arena 4 of District supervision practices are also completely up to the supervisor, and are not encouraged or supported by any initiative-related function.

Our analysis indicates that ripples tend to be unsystematic and are not typically sustained, in part because they are based on particular individuals rather than systemic functions. It seems that institutionalizing ripples could facilitate their sustainability, as well as their depth. Since "a key criterion for scale as reinvention is widespread use of an innovation as a jumping-off point for further innovation" (Morel et al., p. 373), ripples could be considered as "reinventions" of the

initiative. In this way, ripples can be regarded as part of the dynamic scaling up process, promoting the innovation in different ways than what was originally conceptualized by policymakers.

Conclusion

Toh and colleagues (2016) discussed the centralization and decentralization processes maturing in the Singaporean education system, concluding, “it is not about transforming one component but all the components in the ecosystem in a coherent manner” (p. 1264). Viewing the district as a complex ecosystem, consisting of intended and unintended activities, this study expands our understanding of scaling up processes of educational reforms, illuminating the possible unintended outcome of the intersection between practitioners and reform ideas and tools. Our findings highlight an aspect of scaling up that we termed “recontextualization”, which has implications for the way scaling up processes are examined and approached.

Our analysis of the ripple effects of the “Leading Teachers” initiative revealed four arenas in which elements of the initiative (tools, ideas, approaches) were recontextualized from their original aims and settings. In particular, we noted the importance of individuals as mechanisms for transferring ideas across contexts, the important role of ripples in advancing the initiative's cultural ethos, and the fact that ripples tend to be unsystematic and therefore unsustainable.

These findings suggest that more attention should be paid, in both research and practice, to the impact of reforms on meaningful educational change beyond their original aims and settings. Alongside the potential affordances “ripples” have, careful consideration should be given to their latent disadvantages, such as obscuring the reform's intended goals.

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