

# Principals' sense-making of resource allocation within a national reform implementation

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## Abstract

Through a sense-making lens, this qualitative study explores high school principals' considerations while they perceive and enact additional resources within a national reform implementation. Principals' allocation of resources, especially as part of a national reform, is a complex matter for schools' effectiveness in an era of accountability. This study investigates data from interviews with 22 Israeli high school principals implementing the national reform in secular and religious state schools from all school districts. Data analysis has yielded three themes: (a) promoting students' learning achievements towards matriculation exams; (b) deepening student-teacher relations; and (c) developing a new pedagogy. Exploring the allocation of resources to suit principals' particular needs through a sense-making prism may contribute to the scholarship and to the practice of school leadership while promoting change within a national reform implementation.

## Keywords

principals, pedagogical reforms, sense-making process, resource allocation, high schools, individual hours

## Introduction

Coping with rapid extensive changes in the complicated educational system, school principals must lead their students to better performance (Coburn et al., 2016; Organisation for Economic Co-operation and Development, [OECD], 2016b; Tran et al., 2018). In this context, schools worldwide move towards a combination of increased autonomy alongside rigorous accountability during a national reform implementation (Cheng et al., 2016; Neeleman, 2019). This contradicting trend aiming towards achieving high levels of pedagogical outcomes through school autonomy and intensified accountability requires principals to question their common practices (Pietarinen et al., 2017).

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Challenging existing pedagogical practices (e.g., introducing new teaching methods), school principals make sense of receiving autonomy to decide how to exploit the allocated reform resources on the one hand (Shirley, 2016), as well as meeting accountability pressures and standardization regulations of policymakers, district authorities, local council, and parents on the other hand (Saltrick, 2010; Weick, 2009). Attaching a new meaning to their school practices while understanding and enacting reform mandates, principals go through a sense-making process. Through the process of sense-making, school leaders draw upon their own histories, experiences, prior knowledge, beliefs, and the context in which they are working to construct a meaning out of the new information they face and the autonomy to allocate resources they received (Coburn, 2016; Spillane and Anderson, 2014).

Schools are provided with more autonomy in an effort to make resource allocation decision-making more responsive to the needs of individual school populations. Nevertheless, research makes very clear that policies to enhance school autonomy do not necessarily lead to autonomy in practice (e.g., Agasisti et al., 2013). Viewed from a sense-making lens, school principals as autonomous actors play a central role in allocating resources to implement pedagogical changes. Put differently, implementing national reform initiatives necessarily entails the translation of new ideas into school pedagogical practices, which produces complex sense-making processes regarding the allocation of external resources. In this regard, school principals experience some problems while implementing the national reform. For example, they rely on previously constructed cognitive frames which are largely grounded in their past experiences with large-scale reforms and find it difficult to integrate accountability focus with a new pedagogy approach. This challenge calls for a much needed analysis of principals' internal processes as they adapt reform demands to local conditions (Brezicha et al., 2015; Koyama, 2014).

## **Aims and objectives**

In order to understand why reform demands are implemented differently in local contexts, this study explores the internal processes by which principals view and enact resource allocation within a national reform that is based on a top-down authoritarian relationship between policymakers and schools. In this paper, resource allocation refers to a form of individual hours (e.g., teaching in small groups of students) during the implementation of a national reform. The research question guiding the study is as follows: from a sense-making framework, what are the considerations that guide high school principals of resource allocation in the form of individual hours during the implementation of a national pedagogical reform? Such research may contribute to both the theory and the practice of school leadership in times of pedagogical reforms (Derrington and Campbell, 2015) and point to conceptual and practical implications as well as future research avenues.

According to the Gini coefficient for measuring a nation's distributive inequality, Israel is among the countries with the broadest gap between rich and poor, alongside the USA, the UK, and Mexico (OECD, 2016a). Mindful of the great diversity among school populations, recent education policy in Israel has been directed towards achieving high levels of equality in education outcomes across the board, aiming to narrow the achievement gap upward through growing performance pressure. In practice, however, the Israeli student achievement distribution is characterized by a low level of achievement combined with a growing achievement gap, as evidenced in various international comparative examination studies (BenDavid-Hadar, 2016). This evolving

educational context—with national Ministry policies focusing on narrowing students' achievement gap—provides a unique opportunity to explore our research question.

## Theoretical framework

### *Reform implementation from a sense-making perspective*

Implementing a pedagogical reform is a continuous endeavor (Li, 2017; McDonnell and Weatherford, 2016; Young and Lewis, 2015). A large body of literature has shown that a central determinant of the effectiveness of school reform is the way in which it is implemented (Ramberg, 2014). Studies on reform implementation indicate that policies are rarely implemented as written and intended (Porter et al., 2015; Rigby et al., 2016). Within the context of a reform, maintaining existing practices, or carrying out a process of change, principals frame their environment through interpretive mental models in order to “make sense” of local and external demands. In this sense, policy enactment is the process by which principals creatively interpret, negotiate, mediate, and re-contextualize policy mandates into a specific set of actions that suit their particular situations (Fullan, 2016).

Three interrelated processes help in forming a holistic picture out of an ambiguous event, that is, in sense-making: creation, interpretation, enactment (Weick, 2009). First, individuals gather data from various sources (e.g., their own histories, experiences, prior knowledge, beliefs, and the context in which they work) in order to explore the broader system and map the unfamiliar situation. Sense-making is a useful tool for people faced with a bewildering lack of information as it provides a cognitive map. This mapping technique clarifies the ambiguous situation by illustrating, elucidating and inviting people to discuss the situation and contribute ideas in order to reach a clearer understanding and render their actions more effective (Ancona, 2012). Since sense-making is about creating a holistic picture rather than about finding the “correct” view of a problem, there can never be a single “accurate” map. The creation process involves bracketing, noticing, and extracting cues from the actual experience of the ambiguous event. To develop the initial sense created into a more organized perception, individuals go through the second process, providing multiple interpretations of the ambiguous event. In the enactment process, individuals translate their knowledge into actions. This process consists of incorporating new information and eventually taking action, based on the interpretation created previously. Research findings, however, differ on seeing creation, interpretation, and enactment as separate events, suggesting that interpretation and enactment are interrelated despite their frequent portrayal as occurring linearly, one after the other (Kaplan and Owings, 2017).

Implementing a pedagogical reform through a sense-making approach is a non-linear, circular, continuous process in which school principals navigate uncertainty, ambiguity and confusion while meeting policy demands (Maitlis and Christianson, 2014). Understanding and processing new information, principals rely on prior knowledge, experience, and beliefs embedded within their social context. While creating a cognitive map of the unfamiliar situation, principals construct and enact a meaning of external reform demands. Accordingly, the continuous motion of principals' sense-making in reform implementation is depicted as an interrelated and interconnected process, as illustrated in Figure 1 in the Appendix.

Although seemingly straightforward, pedagogical policies vary across local contexts, as school leaders' perceptions and actions shape both implementation and outcomes of reforms. Therefore,

principals' sense-making is significant for determining how and to what extent they implement individual hours (explained below) in a specific school (Pietarinen et al., 2017).

### *Principals' sense-making of resource allocation during reform implementation*

Reforms accompanied by resources may enable schools to use their discretion in the implementation of the reform. Yet, school leaders are under pressure due to the expectations of the establishment (e.g., Ministry, district officials) that they should use the resources allotted to them efficiently to maximize student performance. In some reforms the school management is allowed to choose the model of resource implementation out of several alternatives offered to them (Mangan et al., 2014). However, when the resources are allotted for performance within a short time span, this restricts principals and makes it more difficult for them to use their degrees of freedom to decide on the appropriate alternative.

Creating a new school pedagogy involves competing policy tensions associated with principals' resource allocation autonomy (Plecki et al., 2009). Schools that receive the necessary autonomy and power to decide how to exploit the allocated resources will be more successful in terms of translating these resources into school-level improvements (De Haan, 2017; DeAngelis and Barnard, 2020). In contrast, schools that are exposed to political pressures regarding resource allocation feel that their professional autonomy is harmed, and they avoid investing in longer term initiatives (Allen et al., 2012). Within this context of a reform characterized by uncertainty and conflicting demands, principals make sense of resource allocation to suit their particular situations.

Principals' sense-making of resource allocation within reform implementation is their process of giving a meaning to new information, working habits and arrangements as they face ambiguity, confusion, and misunderstandings. This dynamic process of constructing meaning out of present stimuli is mediated by prior knowledge, experiences, beliefs, and values, which are all embedded in the social context within which people work. Interacting knowledge, beliefs, experience, and context, principals interpret and translate external resources within the autonomy of running their school; thus principals construct meaning regarding the possible ways of resource allocation, which in turn orients their actions (O'Laughlin and Lindle, 2015; Sumbera et al., 2014).

Using sense-making perspective in educational leadership context suggests that principals make, enact and implement their meaning of reform demands in the form of external resources on the base of overlapping social contexts inside and outside of school (e.g., policymakers, district authorities, local council, teachers, parents, and students). In this sense, applying sense-making to a centralized education system is problematic since school principals have lower measures of freedom to decide on how to shape teaching and learning and a greater need to make sense and align to the broad central interpretations of the policies under such a contextual condition. Therefore, based on the theoretical framework, the goal of this study is to explore *how* and *why* principals perceive and enact resource allocation (i.e., in the form of individual hours) through a sense-making lens during the implementation of a national pedagogical reform.

### **Research context**

The Israel Ministry of Education controls the writing and distribution of curricular materials, standards, testing, and teachers' hiring and firing. While all schools follow a basic national

curriculum, they do have freedom to specialize (e.g., in arts, environmental studies, or other subjects) in accordance with Ministry guidelines (Nir et al., 2016). In this regard, flexible urban registration has been coupled with attempts to decentralize the school system, such as school-based management and school autonomy. Despite the Ministry's declared school autonomy policy, principals and faculty members still hesitate to act autonomously because these regulations are not perceived as relinquishing control. That said, school autonomy and incentives can help school principals cope with resources, based on their beliefs and experience regarding their ability to allocate resources efficiently (DeAngelis and Barnard, 2020).

This study focuses on the Courage to Change national reform which was initiated in the 2011–2012 school year and implemented in high schools (A General Collective Agreement No. 7040/11). Although the reform was signed in 2012, its gradual implementation lasted for 5 years. Even today, there is a lack of work-environment resources to support reform implementation (State Comptroller and Ombudsman of Israel, 2018). Courage to Change encompasses many aspects of school life, including pedagogical and managerial aspects as well as teachers' employment conditions. Specifically, the reform calls for a reorganization of teachers' educational-pedagogical work, to provide for classroom teaching and individual hours. The individual hours, added as part of the Courage to Change reform and intended mainly for working with groups of up to five students, allow learning to be individually adapted to the needs of small groups. The individual hours serve to broaden and deepen learning, adapt learning to the needs of diverse students, as well as deepen meaningful teacher–student discourse (State Comptroller and Ombudsman of Israel, 2015). This additional allocation of resources is seen by the teachers as helping to improve students' achievements and advancing their social and emotional state (Glickman et al., 2011). The Courage to Change, based on a top-down authoritarian relationship between policymakers and schools, included detailed instructions regarding how to perform individual hours. However, school principals were allowed to demonstrate autonomy regarding the specific content of these hours based on the allocated resources provided by the Ministry.

The public education system in Israel receives most of the state budget, transmitted in the form of teaching hours. Most of the budget is based on government sources (Tamir and Arar, 2019). The unique nature of this reform involved an alteration in the weekly work structure of the teacher so that the teachers would work until 16:00 instead of until 13:00. The additional time would be devoted to the personal work of the teachers and also to meetings and discussions. As part of the reform discussed in this study, six weekly hours were added to the posts of each full-time teacher for work with small groups of students (A General Collective Agreement No. 7040/11). This was an unprecedented allocation in Israel's education system. It constituted an addition of approximately 25% in the work hours of a high school teacher, and on average an addition of approximately 500 teaching hours per school.

Accordingly, principals and teachers reported feeling overstressed, constantly juggling irreconcilable priorities and personal values and motives under high workloads (Berkovich, 2017). The workload under the Courage to Change reform has worsened with implementation of the policy, for example, with the extension of the school day, mainly by adding teaching hours for small-group tutoring. Veteran teachers opposed to the reform claimed that their work conditions have been worsened by increasing their work-load, which, in effect, reduced their hourly wage. They also claimed the government's desire to extend the teachers' workday was part of a long-term plan to lay off teachers and cutback the total number of teaching personnel. In addition, teachers argued that the reform did not address the major problems of the Israeli educational

system, such as overcrowded classrooms and the previous years' cumulative cuts in total teaching hours (Berkovich, 2011).

## **Research design**

In light of the theoretical framework described above, this study has explored high school principals' perceptions and enactments of resource allocation in the form of individual hours during the implementation of a national pedagogical reform. To this end, this qualitative phenomenological study aims to describe a "lived experience" of a phenomenon, focusing on the interactions among the meanings that principals attach to their considerations regarding resource allocation involved in the implementation of the reform (Larsson and Holmström, 2007).

## **Participants**

Participants in this study were high-school principals who implemented the Courage to Change reform and represented the characteristics of the entire population of Israeli school principals. Seeking to maximize the depth and richness of the data, we used maximal differentiation sampling (Creswell, 2014), also known as heterogeneous sampling. It is a purposive sampling technique used to capture a wide range of perspectives, gaining greater insights into a phenomenon by looking at it from various angles. The maximal differentiation sampling was implemented in this study regarding principals' gender, years of teaching experience, years of experience as principal in general, years of experience as a principal in the current school, education, sector of school, and geographical districts. We did not begin the study with a rigid number of participants. In fact, we defined the study sample on an ongoing basis as the study progressed (Taylor et al., 2016). In practice, we approached 46 school principals until we obtained 22 principals who could represent a diverse sampling. In this regard, having access to the information on the context within which these 22 principals worked, we focused on fewer cases, which provided greater depth and detail in terms of their sense-making process of resource allocation. Thus, the 22 participants (15 women, 7 men) were from all of Israel's school districts. On average, participants had 18 years of teaching experience (range = 6–34), and 12 years of experience as school principals (range = 1–25). Twenty-one participants had a master's degree, and one had a PhD.

## **Data collection**

We collected data during the 2012–2013 school year through semi-structured interviews designed to explore principals' personal perspectives (Rossman and Rallis, 2012). Interviews with principals generally lasted 1 hour each. We conducted them in places chosen by interviewees: cafés, their schools, and other locations. All interviews were audio-taped and transcribed verbatim. A specialist in both languages translated transcriptions from Hebrew to English. We fully informed all participants of the purpose of the study and promised them complete confidentiality as well as full retreat options. We assigned pseudonyms to all interviewees.

During the interviews, we presented identical questions to the principals, to clarify how they perceive and enact individual hours. We asked specific questions in order to achieve deeper insight into principals' perceptions and actions regarding resource allocation during a national reform implementation. The interviews focused on four major questions: (a) in your daily work, how do

you and your staff cope with individual hours implementation?; (b); if there is a gap between a reform's detailed instructions regarding how to perform individual hours and school internal goals, where do you and your educational staff see a discrepancy?; (c) in your opinion, how can a school principal assist the educational staff in coping with reform's intents and its implementation? Please explain and provide examples; (d) what processes (formal and informal) did you and your educational staff carry out in adjusting individual hours to your school environment?

### **Data analysis**

Data collection and analysis took place simultaneously in an ongoing process throughout the enquiry, analysis being a three-stage process: condensing, coding, and categorizing. Having collected the data, we found that not all the material at hand could serve the purpose of the study, and that the data required sorting (Miles et al., 2014). Thus, in the first stage of the analysis (condensing), we looked for the portions of data that related to the research question. In the second stage (coding), we coded each segment of relevant data (utterance) according to the aspect of the principal's perception it expressed (Gibbs, 2007). In contrast to the previous stage, this stage was data-driven rather than theory-driven: we did not use a priori codes but rather inductive ones, developed by direct examination of the perspectives articulated by participants (Rossman and Rallis, 2012). After capturing the essence of the utterances in the second stage, we clustered similar utterances to generalize their meanings and derive categories in the third stage (categorizing). At this point, we reworked categories to reconcile disconfirming data with the emerging analysis (Richards and Morse, 2013). Thus, we explored the dimensions of categories, allowing the identification of relationships between categories and the testing of categories against the full range of the data. We performed the analysis in two phases: first, we analyzed principals' voices separately, and next, we analyzed them to generate common themes and elucidate the differences between the voices (Cohen et al., 2011). Generating themes was an inductive process, grounded in the various perspectives articulated by participants (Rossman and Rallis, 2012).

Several measures taken at different stages of the study ensured trustworthiness. First, the diversity of study participants was maintained, in terms of gender, seniority in post, sector of school, and geographical school districts. Second, the researchers conducted the analytic process described above, each analyzing the data independently. At the next stage, researchers met to reflect on the emerging themes and discuss them, as well as to search for data that would either confirm or refute these themes. Third, to evaluate the soundness of the data, we conducted a member check (Schwartz-Shea, 2006) with all participants. We sent the principals transcripts of their interviews, requesting them to evaluate their responses and make necessary additions or refine them if needed. This strategy allowed for an examination of the descriptive data versus the participants' reactions, for endorsing and solidifying the principals' responses. Five of the interviewees changed their answers, clarifying their remarks and adding information omitted previously.

### **Findings**

The data analysis yielded three considerations: (a) promoting students' learning achievements towards matriculation exams; (b) deepening student-teacher relations; and (c) developing a new

pedagogy. Although school principals' considerations are distinct, they are closely interrelated in the context of implementing a national reform.

### *Promoting students' learning achievements towards matriculation exams*

Analysis of the findings suggests that seven principals made sense of the allocation of individual hours while promoting students' learning achievements towards matriculation exams. According to the guidelines of the Israel Ministry of Education (2015; A General Collective Agreement No. 7040/11), the individual hours, added as part of the Courage to Change reform, were intended mainly for learning reinforcement, expanding and adapting learning to various students' needs as well as deepening the meaningful discourse between teachers and students. Although the Israel Ministry of Education suggested these guidelines for the specific use of extra individual hours, schools were provided with autonomy to determine the "what" regarding the purpose and the content of this resource. Tom, a school principal with 20 years of experience, made sense of resource allocation based on his experience with previous reforms:

The Ministry leads us to BELIEVE that we are the captains on this individual hours' voyage. Unfortunately, this "freedom of action" is a familiar cliché. My vast experience with reforms has taught me that policymakers have a TOP-DOWN tendency to say do this and do that. The declared goal regarding individual hours' implementation is "you have full autonomy to do your best- develop new teaching methods." However, the hidden agenda is to maximize the number of students entitled to a matriculation certificate. I am just the messenger, or, in this situation, the technician.

Enacting individual hours through the considerable gap between the declarative level (e.g., the Ministry's declared vision statement), and the operational level (e.g., the reality in schools), Tom remained in the comfort zone in regard to sense-making of resource allocation. Perceiving individual hours as merely another dimension of accountability pressure to maximize his students' achievements, Tom could not enjoy the autonomy opportunity given to him. In a similar fashion, Allen, a principal with 5 years of experience, explained the manner in which he and the educational staff allocated individual hours while "standing between a rock and a hard place":

My teachers and I are "standing between a rock and a hard place." The Ministry's "here-and-now" approach to implement individual hours was overwhelming as we were not given neither enough time nor professional development to develop new practices. If the Ministry still examines my school by the amount of students eligible for the Matriculation certificate I will devote individual hours to enhance our 11th–12th graders' outcomes in subjects with external examinations. My teachers and I feel comfortable in this SAFETY ZONE!

From Allen's point of view, individual hours' implementation is a complex task that lacks time and professional guidance since schools were expected to create innovative teaching methods on short notice (State Comptroller and Ombudsman of Israel, 2015). In this sense, the lack of gradual implementation as well as the Ministry's agenda, which emphasizes school's success in terms of proportions of students eligible for a high school completion certificate, placed him and the teachers in a very difficult position. Assessing schools according to the main output that is frequently measured in Israeli high schools impeded Allen and the teachers from stepping outside of their comfort zone.



School principals were provided with neither time nor effective models for individual hours' implementation. Acknowledging that uncertainty generates greater difficulties in leading a pedagogical change (Wallace and Hoyle, 2012), Amy, a principal with 18 years of experience, made a meaningful connection between prior knowledge and the new idea of individual hours through her sense-making process. Amy developed a flexible model in order to cater the needs of her unique school context within which she operated:

I had to use my prior knowledge because The Ministry of Education had not provided us with a practical model for individual hours. This intense uncertainty could easily shape teachers' negative response to individual hours' implementation. Mine is a school for youth at risk and my first and foremost goal is preventing dropout, so here I do the best I can to maximize all my resources to increase students' achievements. I am brave enough to allow my teachers to be flexible regarding the number of students attending individual hours. Deciding to teach individual hours to more than five students at a time means protecting my students. How can policymakers decide that I may not teach an individual hour with five students at the most? This is absurd, because half of my students failed at least two subjects on their matriculation exams.

Adapting the extra reform hours to fit into her school context while deviating from technical-structural reform's elements, Amy maintained a considerable decision-making autonomy regarding the maximum size of learners' groups. Staying within her comfort zone, Amy enhanced her students' success.

### *Deepening student-teacher relations*

According to reform dictates (A General Collective Agreement No. 7040/11), individual hours were intended to deepen the meaningful discourse between teachers and students. Five school principals made sense of resource allocation to leverage teacher-student relationships while focusing on the social aspect. Leveraging individual hours for the sake of students' achievements and their interpersonal skills, Sarah, a principal with 24 years in office, did not rely on her professional experience but rather made sense of individual-hours implementation while depending on the superintendent's specific guidelines:

Not knowing what to do with the extra reform hours, I contacted the superintendent. She made it crystal clear that these hours were designed to increase students' achievements and to leverage teacher-student relationship. Realizing that Math and English teachers overwork, regardless of reform dictates and cannot squeeze individual hours into their overloaded schedule, I allowed them to do marathons toward the end of the semester. Teachers from other subjects, for example sports and art, provide students with strategies to promote their social skills.

Instead of using her previous experience in order to frame a new meaning out of the confusing situation, and thus maintain her autonomy as a principal regarding the purpose and the content of the individual hours, Sarah was reactive while relying on external guidance. Balancing between improving students' outcomes and deepening student-teacher relations, Sarah perceived her degrees of freedom as staying within her comfort zone. As opposed to Sara, Ethan, a principal with 21 years of experience, enacted the extra reform hours based on his previous work experience, while building student-teacher relationship:

I began my educational career as a Hevruta coordinator. I led social-educational activities in school and facilitated a different type of learning – attentive and personal. Promoting collaboration through personal acquaintances and mutually respectful communication is a great tool for empowering both teachers and students. This previous experience has taught me that for learning, RELATIONSHIPS are everything! This year, I encourage biology and civics teachers, our project-based-learning teachers, to perform individual hours collaboratively. During teacher-student meetings, they talk with students about collaboration problems that pop-up in their PBL (e.g., project-based -learning) lessons. I believe that student-teacher collaborations can make students feel more committed to school.

Ethan allocated resources in a way that reflected his former experience as a Hevruta (e.g., a form of cooperative learning) coordinator. Utilizing individual hours to build strong teacher-student relationship in order to improve students' learning, Ethan's sense-making demonstrated policymakers' expectations for school accountability.

Integrating their context with extra instructional time, three principals facilitated effective student-teacher discourse while leveraging positive school climate. Jaxon, a principal with 13 years of experience, explained:

Adjusting the individual hours to my specific context means improving the school climate. Last year, policymakers measured my school's effectiveness and it resulted in a huge crisis. Many students reported experiencing both problems with their teachers and little academic success. The Courage to Change reform enabled me to establish caring and supportive relationships between teachers and students during individual hours. A positive school climate has a positive effect on students' emotional needs and their achievements.

Jaxon's sense-making process was influenced by his school context. Addressing the crisis while being accountable for his students' academic performance, Jaxon focused on creating supportive teacher-student relationship, thus shaping a positive school climate. Based on his worldview, he claims, feeling emotionally safe is critical to students' success.

Stella, a principal who has 10 years of experience, also focused on nurturing emotional teacher-student relationships to enhance her students' achievements. Providing external expertise to guide her teachers regarding the enactment of individual hours, Stella relied neither on her knowledge nor on her experience:

Seeing myself as a supporter of students' emotional development, my teachers and I perform individual hours with the students for one-on-one conversations. Encouraging students' engagement in academic activities means focusing on the emotional aspect. I could not do it on my own, so I hired personal tutors from a private body to teach us how this should be done, since we could not rely on the Ministry of Education for guidance on this matter.

In short, making sense of resource allocation while promoting students' learning achievements towards matriculation exams and deepening student-teacher relations, principals adhered to policymakers' accountability expectations regarding the implementation of weekly instruction time.

### *Developing a new pedagogy*

School principals made sense of individual hours' implementation while developing a new pedagogy. Not merely passively following the Ministry's regulations and policy directives (Oplatka,

2017), six principals played a central role as autonomous actors while integrating accountability focus with a new pedagogical approach. Translating individual hours into a center for emotional and pedagogical support, principals shaped a new way of interaction between teachers and learners. Sharon, a principal of an Ulpana (a religious, girls'-only high school) with 19 years of experience, presented the image of a successful booth at the fair to describe a new form of teacher-student interaction. Adjusting the reform to her religious school context, Sharon expanded:

We are committed to tradition. Matriculation exams and students' outcomes are still our main goal, but Courage to Change has created a new routine for us to deal with. My teachers and I had a great opportunity to strengthen interpersonal relationships and improve our communication with the students. Addressing our religious needs, we established a center for emotional and pedagogical support that operates throughout the week. Our girls come from diverse backgrounds and they need help after school hours with their additional exams in Jewish studies. This cutting-edge center is like a successful booth at a fair.

Sharon's metaphor revealed effective exploitation of individual hours while emphasizing collaboration towards the common goal of better education for all. Investigation of attractive strategies that produce effective exploitation of resources were found to include more in-staff cooperation, a positive school climate, and a good relationship between teachers and management. Like Sharon, Aaron, a principal with 13 years of experience, embraced uncertainty while encouraging his staff to question a new path—developing a pedagogical initiative. Having been a commander in the army, he connected leading innovation to making bold decisions:

Leading my soldiers to the front required making bold decisions. Both school leaders and commanders need to take courage and innovate in order to defy traditional practices. My message was: "we can embrace uncertainty and come up with better achievements for our students or fight it and do our same old thing. I strongly believe in our expertise. You are familiar with the skills your students need and you inspire them to be creative." My teachers and I decided to build an innovative pedagogical center that empowers students to develop their own pedagogical voice. Our new center includes various areas of interests, for example, athletics, music, drawing, critical thinking games, and leadership workshops.

Drawing upon his military experience, Aaron made sense of this condition of uncertainty as the "school expertise" while leading his teachers towards innovative questioning of their beliefs. Individual hours' implementation calls for the alteration of teachers' traditional teaching techniques (Hargreaves, 2006).

Broadening their school curriculum, principals used individual hours to introduce innovative pedagogical contents. Vivian, a principal with 25 years of experience, centered on establishing a discipline that was not studied in school:

As I see it, individual hours are all about letting go of old content and old ways of doing things. Don't get me wrong, Matriculation exams are very important! I received a request from my students to open a new Major in music. Unfortunately, I did not have any budget to bring Music teachers. Enlisting a teacher for physics and mathematics, I discovered that he was a musician during the acceptance interview and had worked in this in the past. Shifting my perspective to reach a solution, I asked him whether he could teach music during his individual hours. He said "YES" and enacted my pedagogical vision.

Vivian's viewpoint, embracing a pedagogical change in the school curriculum through a new discipline, meant exercising her pedagogical autonomy. Operating within his special school context, Cameron, a principal with 4 years of experience, made sense of reform hours while attending his gifted students' special needs: "Most of my colleagues use individual hours to improve their students' academic achievements for the matriculation exams. I, for one, perceive individual hours' implementation differently. My strategy is not to reduce gaps but rather nurturing our gifted students' skills." Accordingly, individual hours were allocated to foster excellence and develop capabilities that were not directly reflected in students' Matriculation grades. Nathan, a principal with 18 years of experience, talked about an innovative model for his low performing students. In a school with a history of low-performance, flexibility was a must:

My school is situated in a low-income neighborhood. Past challenges have taught me that being flexible can facilitate our students' learning. I was goal-oriented regarding the appropriate manner to maximize individual hours' implementation. Coming up with a flexible pedagogical model for our low performing students, my teachers and I decided that we would be as innovative as we can while allowing these students to choose one new content they would like to learn, for example gardening, Zoomba [dancing], cooking, and painting. At the end of every school day, they received two individual hours and were full of anticipation.

Making sense of resource allocation based on prior experience with a challenging students' background, Nathan and his educational staff translated new reform demands into a flexible pedagogical model. To summarize, exercising their pedagogical wisdom, principals' sense-making process of individual hours' implementation focused on a new pedagogy through the development of innovative learning centers, new content, and flexible models.

## **Discussion**

The sense-making theory underpinning this study explains principals' perceptions and enactments of allocation of individual hours within a national reform implementation. Our qualitative analysis of principals' interviews indicates that participating principals perceived and enacted individual hours relating to three interconnected considerations. The first consideration was promoting students' learning achievements towards matriculation exams: principals made sense of individual hours for learning reinforcement towards Matriculation exams. The second consideration was deepening student-teacher relations: principals made sense of extra reform hours to build strong teacher-student relationship while focusing on social and emotional aspects. The third consideration was developing a new pedagogy: principals made sense of individual hours while integrating accountability focus with a new pedagogical approach. Our findings showed that out of the 22 interviewed principals, the responses of only 18 were accounted for the derivation of the themes. Accordingly, several principals' perceptions and enactments overlapped and could be sorted into more than one consideration. In this regard, the first consideration, promoting students' learning achievements towards matriculation exams, has shared underlying meanings with the second consideration, in the context of utilizing individual hours to build strong teacher-student relationship in order to improve students' learning. In a similar fashion, specific examples from the second consideration, such as how school principals developed collaborative and student-centered instruction and shaped a positive school climate, have shared underlying meanings with the third consideration in the context of attractive strategies

that produce effective exploitation of resources. Although all three considerations are interrelated in the context of implementing a national reform, it is important to understand the unique focus of each one of them separately.

Focusing their attention on standardized Matriculation exams and students' achievements, principals preserved traditional practices while staying within their comfort zone. Schools often refashion new resources to support existing ways of working or simply reject them (Peurach et al., 2019). Employing passive means of engagement while rhetorically paying lip service to policy demands as passive sense-makers, school principals enacted individual hours while aiming at improving their students' achievements towards Matriculation exams. Principals made sense of reform guidelines based on personal factors, such as experience with previous large-scale reforms (e.g., lack of time, gradual implementation, and professional resource), prior knowledge, beliefs, and the context within which they operated (Coburn et al., 2016). Encountering difficulties in implementing individual hours, principals' sense-making was anchored in prior reform initiatives. The current reform included detailed instructions regarding how to perform individual hours, however school principals were allowed to demonstrate autonomy regarding the specific content of these hours (A General Collective Agreement No. 7040/11). Instead of making sense of the national reform through their professional identity as change agents, these principals expressed a feeling that they had not been granted autonomy to decide how to implement the reform and thus relied on their previously constructed cognitive frames, which were largely grounded in past experiences with large-scale reforms. Accordingly, how and why school principals perceive and enact resource allocation depends to a great extent on the experiences, prior knowledge, beliefs, and the context within which they work. Hence, sense-making is concerned with more than simply interpreting an idea or concept, or, in our case, individual hours' guidelines. This process is concerned with how principals author their perception of a particular policy or mandate as well as enact it in practice (Coburn, 2016).

Principals' sense-making of resource allocation was anchored in the problematic nature of the reform (e.g., encouraging the attainment of 21st century innovative teaching methods while at the same time stressing high-stakes testing). Making sense of extra reform hours around schools' success in terms of proportions of students eligible for a high school completion certificate, principals were not engaged with reform messages on their pedagogical level (Berkovich, 2011). Deviated from the technical details, individual hours' guidelines, principals performed extra hours with more than five students. Yet, principals preserved traditional pedagogical practices while staying loyal to national standards (Beck et al., 2002).

Adhering to reform dictates, principals made sense of individual hours while deepening teacher-students relations. Though focusing on collaborative and student-centered instruction (e.g., performing collaborative lessons through Project-Based Learning) as well as on shaping a positive school climate, principals' consideration to build supportive teacher-student relationships was based on social and emotional aspects in order to enhance students' achievement growth (Machin et al., 2010). Bringing teachers towards the reform, principals in this study reduced teachers' uncertainty while providing expertise and knowledge (e.g., hiring personal tutors from a private body).

As active sense-makers and autonomous local policymakers, school principals made sense of individual hours while initiating a pedagogical change. Encouraging their teachers to question traditional teaching practices, principals decided to collaborate and embrace a pedagogical change within their schools. For example, translating individual hours into a center for emotional and

pedagogical support, a center for students with learning disabilities, and the development of a new pedagogical discipline, principals leveraged extra reform hours as an opportunity for school change processes. Establishing a positive school culture based on principals' faith in teachers' abilities, was considered as a desirable condition for successful exploitation of resources (Berebitsky and Salloum, 2017).

## **Limitations and future research**

This study provides new data regarding school principals' perceptions and enactments of resource allocation within a sense-making framework while implementing a national reform. Having said that, this study is subject to several limitations. First, the participants and their considerations relate to a specific educational context. Hence, in order to enable generalization of the findings and substantiate their international validity, we recommend conducting similar studies in various socio-cultural contexts elsewhere as well. In other words, it is important to understand how sense-making takes place in different school contexts, as sense-making is not a one-size-fit-all doctrine that provides a yes or no answer for a rainbow of scenarios. Second, the interviews with the principals took place in the second academic year of reform implementation. Longitudinal research is needed to examine whether and how, while making sense of resource allocation, principals change their considerations in time, from the early reform phase through to the implementation stage, since sense-making is a continuous and ongoing process (Maitlis and Christianson, 2014). Third, we used maximal differentiation sampling (Creswell, 2014) to capture a wide range of perspectives and gain greater insight into principals' sense-making processes. However, in this study we could not differentiate between each principal's consideration and the school context from which it emanated. Therefore, it would be advisable to explore the interconnections between principals' considerations and factors such as gender, seniority, school size, and districts. Moreover, our research has not focused closely on principals' own histories. Future research could explore how their histories might shape school principals' consideration while navigating their schools through an external allocation of national resources. Finally, the sense-making process in this study was limited to principals' perceptions only. This structure does not explain the more expansive usage of sense-making as a group-based and network-focused framework. Thus, a co-developmental, sense-making process requires exploring superintendents', policymakers', and school-teachers' perceptions of resource allocation as well. In this sense, it is important to explore the congruence between the principal's discretion regarding resource allocation and the sense-making process of the school administration team.

This research holds both theoretical and practical contribution. Theoretically, this study addresses the intersection of three areas that have received little academic attention to date. First, pedagogical reforms are moving towards a combination of increased school autonomy and intensified accountability (Rigby et al., 2016). Yet, little is known about the considerations that guide school leaders while allocating resources within this particular context that relates autonomy and accountability. In this regard, our study can serve as a conceptual and practical anchor for schools that are required to implement similar allocations of resources in different countries. Second, how schools, particularly school principals, use their autonomy for pedagogical innovation deserves empirical scrutiny (Agasisti et al., 2013). Third, sense-making as a conceptual framework may potentially enable an in-depth understanding of school principals' internal processes in translating

new ideas into pedagogical practices while being both autonomous and accountable (Brezicha et al., 2015).

Practically, this qualitative phenomenological study, which explored principals' perceptions and enactments of resource allocation in diverse school contexts during the implementation of a national reform, may provide important information to policymakers regarding future design of pedagogical reforms that balance the tension between accountability and school autonomy (Shirley, 2016). Promoting a better understanding that encourages an effective balance between accountability requirements and pedagogical autonomy, allows school leaders more degrees of freedom to decide on how to shape longer term teaching and learning initiatives. This will nurture a safe environment for school leaders in which they can better make sense of reform demands as well as use the resources allotted to them efficiently to maximize student performance.

In sum, sense-making processes can assist the educational staff and school leaders in implementing allocations of resources while balancing between autonomy and accountability, thus promoting new pedagogical practices. There have been significant changes since the National Reform Implementation was introduced, nevertheless school leaders are still grappling with accountability-autonomy balance and hesitate to act autonomously (Eisnberg and Selivansky Eden, 2019). Therefore, this article proposes both relevant and practical data to principals facing the fundamental challenge of reform implementation today. A closer examination of leaders' sense-making processes may lead towards deeper understanding regarding using autonomy to meet diverse students' needs in general and improving teaching and learning in particular.


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### References

- A General Collective Agreement No. (7040/11) Between the local government center and the three major cities (employers) and the teachers' organization on the implementation of "oz Le'tmura" reform in high schools. Available at: <http://www.glima.info/agreements/7040-2011.pdf> (accessed 24 November 2019).
- Agasisti T, Catalano G and Sibiano P (2013) Can schools be autonomous in a Centralised educational system? On formal and actual school autonomy in the Italian context. *International Journal of Educational Management* 27(3): 292–310.
- Allen R, Burgess S, Rasul I and McKenna L (2012) *Understanding school financial decisions (DFE research report DFE-rr183)*. Available at: <http://dera.ioe.ac.uk/14061/1/DFE-RR183.pdf> (accessed 24 November 2019).
- Ancona D (2012) Sensemaking: framing and acting in the unknown. In: Snook SA, Nohria N and Khurana R (eds) *The Handbook for Teaching Leadership: Knowing, Doing, and Being*. Thousand Oaks: Sage, pp. 3–19.

- Beck L, Elfers A, Plecki M and Portin B (2002) *Examining Leadership and Resource Allocation Practices: How Schools Create Expanded Opportunities for Instructional Improvement*. Seattle: Educational Leadership and Policy Studies, University of Washington. Available at: <https://docs.gatesfoundation.org/documents/examiningleaderresallocation02.pdf> (accessed 24 November 2019).
- BenDavid-Hadar I (2016) School finance policy and social justice. *International Journal of Educational Development* 46: 166–174.
- Berebitsky D and Salloum SJ (2017) The relationship between collective efficacy and teachers' social networks in urban middle schools. *AERA Open* 3(4). doi:10.1177/2332858417743927.
- Berkovich I (2011) No we won't! teachers' resistance to educational reform. *Journal of Educational Administration* 49(5): 563–578.
- Berkovich I (2017) Educational reform Hyperwaves: reconceptualizing Cuban's theories of change. *Journal of Educational Change* 18(4): 413–438.
- Brezicha K, Bergmark U and Mitra DL (2015) One size does not fit all: differentiating leadership to support teachers in school reform. *Educational Administration Quarterly* 51(1): 96–132.
- Cheng YC, Ko J and Lee TTH (2016) School autonomy, leadership and learning: a Reconceptualisation. *International Journal of Educational Management* 30(2): 177–196.
- Coburn CE (2016) What's policy got to do with it? How the structure-agency debate can illuminate policy implementation. *American Journal of Education* 122(3): 465–475.
- Coburn CE, Hill HC and Spillane JP (2016) Alignment and accountability in policy design and implementation: the common core state standards and implementation research. *Educational Researcher* 45(4): 243–251.
- Cohen L, Manion L and Morrison K (2011) *Research Methods in Education*, 7th ed. London: Routledge.
- Creswell JW (2014) *Educational research: planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 4th ed. Harlow: Pearson.
- De Haan M (2017) The effect of additional funds for low-ability pupils: a nonparametric bounds analysis. *Economic Journal* 127(599): 177–198.
- DeAngelis CA and Barnard C (2020) *Effects of Charter School Competition on District School Budgeting Decisions: Experimental Evidence From Texas* (Ed Working Paper No. 20-198). Providence: Annenberg Institute, Brown University. doi:10.26300/asnf-9361.
- Derrington ML and Campbell JW (2015) Implementing new teacher evaluation systems: principals' concerns and supervisor support. *Journal of Educational Change* 16(3): 305–326.
- Eisenberg E and Selivansky EO (2019) *Adapting Israel's Education System for the Challenges of the 21st Century*. Jerusalem: The Israel Democracy Institute. Available at: <https://en.idi.org.il/media/13080/adapting-israels-education-system-final.pdf> (accessed 25 March 2020).
- Fullan M (2016) *The New Meaning of Educational Change*, 4th ed. New York: Teachers College Press.
- Gibbs GR (2007) *Analyzing Qualitative Data*. London: Sage.
- Glickman H, Lipshtat N, Raz T and Ratner D (2011) *Does National System of Small-Groups Learning Improve Outcomes? An Analysis of the "New Horizons" Education Reform*. Presented at the annual meeting of the American Educational Research Association, New Orleans, LA, April. Available at: <http://cms.education.gov.il/NR/rdonlyres/329F6A02-F7FE-4C8B-AB0B-3C108EF0182E/128083/NewHorizonsHagitGlickmanAERA2011.pdf> (accessed 24 November 2019).
- Hargreaves D (2006) *Personalising Learning—6: The Final Gateway: School Design and Organisation*. London: Specialist Schools and Academies Trust. Available at: <https://aschofield.files.wordpress.com/2011/02/personalising-learning-6-the-final-gateway-school-design-and-organisation.pdf> (accessed 24 November 2019).



- Israel Ministry of Education (2015) organizing the pedagogical work. Available at: <http://cms.education.gov.il/EducationCMS/Units/Ofek/MaBaofek/> (accessed 24 November 2019).
- Kaplan LS and Owings WA (2017) *Organizational Behavior for School Leadership: Leveraging Your School for Success*. New York: Routledge.
- Koyama J (2014) Principals as bricoleurs: making sense and making do in an era of accountability. *Educational Administration Quarterly* 50(2): 279–304.
- Larsson J and Holmström I (2007) Phenomenographic or phenomenological analysis: does it matter? Examples from a study on Anaesthesiologists' work. *International Journal of Qualitative Studies on Health and Well-Being* 2(1): 55–64.
- Li YY (2017) Processes and dynamics behind whole-school reform: nine-year journeys of four primary schools. *American Educational Research Journal* 54(2): 279–324.
- Machin S, McNally S and Meghir C (2010) Resources and standards in urban schools. *Journal of Human Capital* 4(4): 365–393.
- Maitlis S and Christianson M (2014) Sensemaking in organizations: taking stock and moving forward. *The Academy of Management Annals* 8(1): 57–125.
- Mangan MT, Hillman K, Madl T, Rossi C and Wings S (2014) *Illinois School Improvement Grants: Strategies and Conditions for Improving Student Outcomes*. Presented at the Association for Education Finance and Policy 39th Annual Conference, San Antonio, TX, March.
- McDonnell LM and Weatherford MS (2016) Recognizing the political in implementation research. *Educational Researcher* 45(4): 233–242.
- Miles MB, Huberman MA and Saldaña J (2014) *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. Thousand Oaks: Sage.
- Neeleman A (2019) The scope of school autonomy in practice: an empirically based classification of school interventions. *Journal of Educational Change* 20(1): 31–55.
- Nir A, Ben-David A, Bogler R, Inbar D and Zohar A (2016) School autonomy and 21st century skills in the Israeli educational system: discrepancies between the declarative and operational levels. *International Journal of Educational Management* 30(7): 1231–1246.
- O'Laughlin L and Lindle JC (2015) Principals as political agents in the implementation of IDEA's least restrictive environment mandate. *Educational Policy* 29(1): 140–161.
- Oplatka I (2017) A call to adopt the concept of responsible leadership in our schools: some insights from the business literature. *International Journal of Leadership in Education* 20(4): 517–524.
- Organisation for Economic Co-operation and Development [OECD] (2016a) *OECD Economic Surveys - Israel*. Paris: Author. Available at: [www.oecd.org/economy/surveys/Israel-Overview-OECD-Economic-Survey-2016.pdf](http://www.oecd.org/economy/surveys/Israel-Overview-OECD-Economic-Survey-2016.pdf) (accessed 24 November 2019).
- Organisation for Economic Co-operation and Development [OECD] (2016b) *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*. Paris: Author.
- Peurach DJ, Cohen DK, Yurkowsky MM and Spillane JP (2019) From mass schooling to educational systems: changing patterns in the organization and management of instruction. *Review of Research in Education* 43(1): 32–67.
- Pietarinen J, Pyhältö K and Soini T (2017) Large-scale curriculum reform in Finland: exploring the interrelation between implementation strategy, the function of the reform, and curriculum coherence. *The Curriculum Journal* 28(1): 22–40.
- Plecki ML, Knapp MS, Castenada T, Halverson T, LaSota R and Lochmiller CR (2009) *How Leaders Invest Staffing Resources for Learning Improvement*. Seattle: Center for the Study of Teaching and Policy. Available at: <https://education.uw.edu/sites/default/files/profiles/documents/plecki/Plecki%20et%20al%202009%20Resources.pdf> (accessed 24 November 2019).

- Porter RE, Fusarelli LD and Fusarelli BC (2015) Implementing the common core: how educators interpret curriculum reform. *Educational Policy* 29(1): 111–139.
- Ramberg MR (2014) What makes reform work? School-based conditions as predictors of teachers' changing practice after a national curriculum reform. *International Education Studies* 7(6): 46–65. Available at: <http://www.ccsenet.org/journal/index.php/ies/issue/view/1083> (accessed 24 November 2019).
- Richards L and Morse JM (2013) *Readme First for a User's Guide to Qualitative Methods*, 3rd ed. Thousand Oaks: Sage.
- Rigby JG, Woulfin SL and März V (2016) Understanding how structure and agency influence education policy implementation and organizational change [editorial]. *American Journal of Education* 122(3): 295–302.
- Rossmann GB and Rallis SF (2012) *Learning in the Field: An Introduction to Qualitative Research*, 3rd ed. Thousand Oaks: Sage.
- Saltrick S (2010) Making sense of accountability: a qualitative exploration of how eight New York city high school principals negotiate the complexity of today's accountability landscape. PhD Thesis, Columbia University, NY.
- Schwartz-Shea P (2006) Judging quality: evaluative criteria and epistemic communities. In: Yanow D and Schwartz-Shea P (eds) *Interpretation and Method: Empirical Research Methods and the Interpretive Turn*. Armonk: M. E. Sharpe, pp. 89–113.
- Shirley D (2016) How to lead educational change. *Journal of Educational Change* 17(3): 281–285.
- Spillane JP and Anderson L (2014) The architecture of anticipation and novices' emerging understandings of the principal position: occupational sense making at the intersection of individual, organization, and institution. *Teachers College Record* 116(7): 1–42.
- State Comptroller and Ombudsman of Israel (2015) The implementation of the courage to change reform in secondary education. In: *Annual Report No. 65c for the Year 2014*. Jerusalem: Author, pp. 943–986. Available at: <https://www.mevaker.gov.il/sites/DigitalLibrary/Pages/Reports/29723.aspx?AspxAutoDetectCookieSupport=1> (accessed 24 November 2019).
- State Comptroller and Ombudsman of Israel (2018) The Israeli ministry of education: promoting meaningful learning in schools. In: *Annual Report No. 68c for the Year 2017*. Jerusalem: Author, pp. 753–818. Available at: <https://www.mevaker.gov.il/he/reports/pages/627.aspx> (accessed 25 March 2020).
- Sumera MJ, Pazey BL and Lashley C (2014) How building principals made sense of free and appropriate public education in the least restrictive environment. *Leadership and Policy in Schools* 13(3): 297–333.
- Tamir E and Arar K (2019) High school managements resources allocation in an era of reforms. *International Journal of Educational Management* 33(5): 828–847.
- Taylor SJ, Bogdan R and DeVault ML (2016) *Introduction to Qualitative Research Methods: A Guidebook and Resource*, 4th ed. Hoboken: Wiley.
- Tran H, McCormick J and Nguyen TT (2018) The cost of replacing south Carolina high school principals. *Management in Education* 32(3): 109–118.
- Wallace M and Hoyle E (2012) The dynamics of irony in organizational change: coping with a school merger. *Public Administration* 90(4): 974–999.
- Weick KE (2009) *Making Sense of the Organization: Vol. 2. The Impermanent Organization*. Chichester: Wiley.
- Young T and Lewis WD (2015) Educational policy implementation revisited. *Educational Policy* 29(1): 3–17.

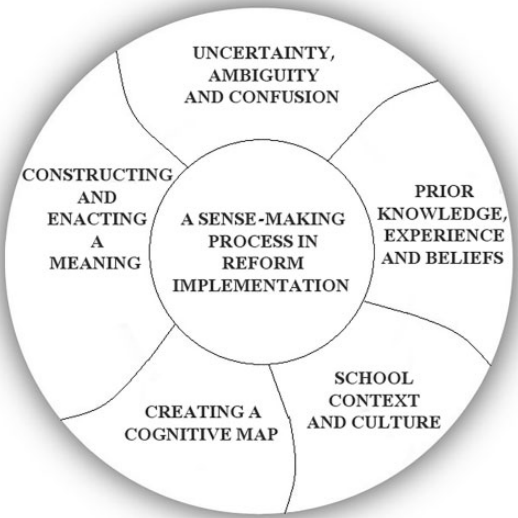
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### Appendix



**Figure 1.** A sense-making process in reform implementation.