

Street–Level Policy Entrepreneurship and Digital Technology Promotion for Migrant Health Risk Communication Policy Implementation

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ABSTRACT

This study aims to explore how Street–level Policy Entrepreneurs (SLPEs) utilized their strategies, skills, and attributes to promote the use of digital technology strategies for migrant health communication policy implementation. It focused on the implementation activities of SLPEs in Phetchabun and Tak where there were high concentrations of COVID–19 patients and migrants. This study used a comparative case study design which included interviews with 24 SLPEs from the two provinces. It was found that the pandemic accelerated policy actors' adoption of entrepreneurial practices and qualities in promoting the use of digital technology strategies and coping with the implementation challenges. The unique policy context of the two provinces also promoted different utilization of entrepreneurial strategies, skills, and attributes among SLPEs in order to gain social, political, and intellectual capital for policy implementation. This research contributes to the knowledge regarding policy implementation theory and street–level policy entrepreneurship during a public health crisis as well as future pandemic preparation.

Keywords: Street–level Policy Entrepreneurship, COVID–19, Health Risk Communication, Migrant Health

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Introduction

In 2020, the World Health Organization (WHO) declared the COVID-19 pandemic a global public health emergency (WHO, 2020). Health risk communication is a public health emergency protocol which aims to advise people to understand risks and make plans to protect themselves and their relatives (WHO, 2017). Thailand was successful in its capacity for emergency preparedness and response planning according to the 2021 Global Health Security Index (Johns Hopkins Center for Health Security, 2021) being the first country outside China to detect the COVID-19 epidemic (Doung-Ngern et al., 2020).

However, since December 2020, Thailand has experienced severe outbreaks which are believed to have originated from migrant populations (Marome & Shaw, 2021). As a popular working destination for migrants, there are approximately 5 million documented migrants and 2.5 million undocumented migrants living and working in Thailand (International Organization for Migration, Thailand, 2023). In response to this, the Thai government implemented both medical and non-medical measures to prevent and control the outbreak, one of which was risk communication (MoPH, 2020; MoPH, 2021). The MoPH (2020) also suggested that all health professionals use information and communication technology (ICT) for communication regarding disease prevention.

Still, the Thai government faced challenges in implementing risk communication policy for migrant health communication due to a lack of understanding of migrant health communication behaviour, especially related to use of digital platforms (Suntayakorn, 2022). Many migrants also faced difficulties in accessing and understanding COVID-19 prevention information due to linguistic barriers, leading to disagreements about preventive measures (Namwat et al., 2020). As the COVID-19 pandemic was a unique emergency situation, the complexity and the challenges faced by the Thai government raise questions as to whether there were any aspects of health communication at the implementation level that need improvement.

From the literature review, the existing studies were limited to analyses of factors causing poor COVID-19 health risk communication (Papwijitsil et al., 2021); investigation into risk communication structures and networks (Kosiyaporn et al., 2022); overall policy concerning the process of communication and the related policy challenges (Suntayakorn, 2022); and the importance of social media as a coping forum (Le Duc, 2021). Moreover, most studies still focused exclusively on macro-level analysis. In fact, the pandemic has posed significant challenges for local actors serving on the front line of disease prevention (Koontalay, Suksatan, Prabsangob, & Sadang, 2021). Street-level bureaucrats (SLBs) are those who affect policy outcomes during a policy implementation process (Lipsky, 2010). However, there are limited in-depth studies on SLBs and their policy networks, in terms of applying digital technology for health risk communication policy implementation among migrants in Thailand. Indeed, the research on this topic may offer contributions to both theory and practice for public policy and administration.

A crisis condition like a pandemic requires SLBs to build innovative strategies to solve complex policy challenges or even transform themselves into policy entrepreneurs (Lavee & Cohen, 2019) or street-level policy entrepreneurs (SLPEs) (Gofen, Lotta & Marchesini da Costa, 2021). In fact, the SLPE concept has become an ongoing research trend within policy studies and public administration, and it focuses on analysis of the phenomenon of SLBs who act as policy entrepreneurs (Cohen & Aviram, 2021). SLPEs refers to energetic individuals or groups of local policy actors who understand the enormous social challenges and aim to change policy in order to solve policy challenges by using their policy entrepreneurial skills, attributes, and strategies (Gofen, Lotta & Marchesini da Costa, 2021). Therefore, SLPEs are not only street-level managers, but also local policy stakeholders who work on the ground, such as, SLBs, NGO workers, volunteers, or active citizens (Petridou & Mintrom, 2021; Arnold, 2021). One important quality that separates policy entrepreneurs from other policy agents is their active entrepreneurial characteristic in seeking policy innovation and

using different tools to challenge the policy status quo to promote policy change rather than maintenance of their power (Mintrom, 2015; Mintrom, 2019).

There are significant reasons for applying the SLPE concept to this study, and these are outlined as follows. First, in terms of theoretical contribution, most of the existing research on policy entrepreneurship has been conducted on normal policy routines (Brodin, 2021). Hence, research on SLPE during crises is rare (Gofen, Lotta & Marchesini da Costa, 2021).

Second, in terms of policy practice, Thailand was the first country to detect COVID-19 outside China (Doung-Ngern, et al., 2020). Consequently, it was in the forefront in terms of starting risk communication policy-making cycles in response to the ongoing health crisis. This unique context has allowed longer opportunities for local policy actors who have SLPE qualities to promote policy changes to solve implementation difficulties. Furthermore, studying SLPE roles during a crisis may uncover the conditions that reinforce or impede local policy actors' ability to adopt SLPE skills, attributes, and strategies when compared with non-crisis contexts.

Finally, the research on SLPE has usually adopted a single case study analysis approach, as well as focusing on the national level of policy operation in western countries (Aviram, Cohen & Beeri, 2019). Undoubtedly, exploring the comparative activities of SLPEs amid a public health crisis in a non-western setting may fill the research gaps by deepening the knowledge related to the applicability of policy implementation theories as well as the literature on the work of street-level policy entrepreneurship during a crisis.

Objectives

This study explores street-level policy entrepreneurs' (SLPEs) strategies, attributes, and skills in promoting the use of digital technology strategies for migrant health risk communication policy implementation, as well as investigating the policy implementation challenges in Phetchabun and Tak provinces.

Study setting

This study focuses on two provinces: Phetchabun province (Bueng Sam Phan and Lom Sak districts) and Tak province (Mae Sot district). These provinces share similar features, as follows. First, they are both located in the lower northern region of Thailand which belongs to the Second Regional Health District. Both had high concentrations of COVID-19 patients from 2020 until September 2022, with 37,691 patients in Tak and 25,539 patients in Phetchabun (MoPH, 2022). Secondly, both provinces have become destinations for migrant workers due to the fact that Tak is a Special Economic Zone (SEZ) while Phetchabun is a famous tourism destination and also has many labor-intensive agricultural industries (The Office of Strategy Management: Lower Northern Province Cluster 1, 2021). Finally, both provinces have the same structure of public health management and have adopted the same health communication prevention protocol (MoPH, 2021). Hence, it is crucial to explore whether these similar traits can contribute to different utilization of policy entrepreneurship practices and qualities in promoting the use of digital technology strategies for migrant health risk communication policy implementation.

In fact, one major difference between the two provinces is that Tak shares its border with Myanmar. Hence, this research also investigates whether this implication influenced the different policy entrepreneurial practices. Finally, this study focuses on the second wave of the COVID-19 pandemic in Thailand (December 2020–March 2021) because this severe outbreak was believed to have originated from within the migrant population (Marome & Shaw, 2021; Department of Disease Control, 2021). This second wave raised attention regarding the introduction and establishment of a health risk communication system for all, including migrants (Department of Disease Control, 2021).

Conceptual framework

This research adapted Mintrom's (2019) policy entrepreneur definition to define SLPEs as energetic individuals who understand the enormous social challenges and aim to innovate or improve policy practices. At the policy implementation level, the street-level bureaucrats play a prime role in operating policy activities and interacting with public service users (Lipsky, 2010). However, policy analysis has shifted towards an ideal of governance that has reconstructed the role of administrative routine and the policy-making process by engaging other parties in the policy arena (Durose, 2011). This has extended the definition of 'bureaucratic' from people in the civil service to any individuals who are policy implementers, including Street-level Quasi-Bureaucrats (SLQBs) who are private agents or ordinary citizens who have social obligations and become active in implementing public tasks (Tummers et al., 2012; Sager et al., 2014). Moreover, Sudhipongpracha and Poocharoen (2021) also argued that SLQBs have played a prime role in supporting SLBs to counter the COVID-19 pandemic in Thailand. Therefore, this research defined both SLBs and SLQBs who utilized entrepreneurial strategies, skills, and attributes to promote the implementation agenda as Street-level Policy Entrepreneurs (SLPEs). During the implementation process, all SLPEs may adopt strategies that are supported by an immense number of attributes and skills. When all elements are combined, they can effectively reinforce the SLPEs in solving policy challenges (Mintrom & Thomas, 2018). Not only high-ranking government officers can become policy entrepreneurs, but also bureaucrats who work on the ground (Petridou & Mintrom, 2021).

In fact, SLPEs who utilize their policy entrepreneurial qualities have differences in some key respects compared with other policy entrepreneurs and policy actors (Arnold, 2021). These differences come from the challenges in controlling implementation directions due to a low position in the institutional hierarchy resulting in distance from high-level decision-makers (Lavee & Cohen, 2019), as well as limited resources and policy networks of supporters to change policy practices (Arnold, 2021). However, acute emergency conditions are

expected to enhance the advantage of SLPEs due to their familiarity with local contexts and their close relationship with and influence on the local public (see more in Gofen, Lotta & Marchesini da Costa, 2021). This reveals that the unique characteristics of SLPEs may provide them with both advantages and disadvantages when utilizing policy entrepreneurial practices.

According to Lavee and Cohen (2019), there are three conditions under which SLBs tend to adopt entrepreneurial strategies, attributes, and skills. The first condition is their perception of social phenomena as an acute crisis. The second condition is their experience in the new context which motivates them to change policy and call for innovation. The last condition is when SLBs find themselves lacking the skills and knowledge to respond to new issues within an emergency context. Moreover, Arnold (2015) also suggested that actors considered to be successful SLPEs are required to achieve three types of capital: intellectual capital, social capital, and political capital. Therefore, it is worth investigating how different SLPEs use skills, attributes, and strategies to gain this capital under certain conditions.

Finally, studies related to frontline agents within the analysis of policy entrepreneurship are rare (Petridou & Mintrom, 2021). There is still limited research on policy entrepreneurs' adoption of the strategies, attributes, and skills which are used by SLBs during the implementation process (Zhang, Zhao, & Dong, 2021). It is important in policy entrepreneurship research to explore how different contextual conditions contribute to actors' operations on the ground (He, 2018). Thus, this study explores the SLPE practices of the relevant SLBs and SLQBs in promoting the use of digital technology strategies for migrant health risk communication policy implementation. It uses 'street-level policy entrepreneurship' (SLPE) as the main theoretical concept. Indeed, this is an integrated concept related to policy entrepreneurship that aims to investigate how bureaucrats, or quasi-bureaucrats, act as policy entrepreneurs or exercise their policy entrepreneurship qualities in shaping policy implementation (Lavee & Cohen, 2019). Moreover, this research also combines the concept of policy entrepreneurial skills, attributes, and strategy proposed by Mintrom (2019)

and the policy implementation theory entitled the Multiple Streams/Critical Juncture approach developed by Howlett (2019) and Howlett, Ramesh and Perl (2020) as the main integrated framework.

The Multiple Streams/Critical Juncture theory consists of five streams of policy process. This study focuses on the policy implementation stage, which includes four streams (problems, politics, process, and program stream). It did not include the policy stream because the policy stream was separated from the main flow (Howlett, 2019). Howlett, McConnel, and Perl (2016) suggested that the policy stream be separated in case the implementation of the policy and its purpose remain highly contested. This aligns with the dynamic situation during the COVID-19 pandemic which caused implementation challenges and highly contested ideas among different policy stakeholders in terms of policy ground operations (Suntayakorn, 2022). The details and scope of the comparative aspects and the combined framework can be seen in Table 1.

Methods

This qualitative study adopted a comparative case study design (CCS) to explore individual experience by analyzing multiple data sources from different interviewees from various jurisdictions (Bartlett & Vavrus, 2017). In-depth interviews were used with SLPEs at the two sites; these lasted 35–40 minutes. The questions prompted interviewees to share their perspectives and experiences related to policy practices. Purposive sampling was used to recruit participants who had engaged in promoting the use of digital technology strategies for migrant health risk communication policy implementation. Potential participants were purposively chosen from a list of local bureaucrats and public health frontline workers which was publicly available on the relevant organizations' websites. They included the head of public health administration and health professionals from a local hospital (LH) or sub-district health promoting hospital (SDHPH). Snowball sampling was also used in some cases in order to select relevant local bureaucrats or other stakeholders for interviews. This research applied inclusive criteria in selecting potential interviewees which included the participants'

organization, position, duration of work in the relevant position (at least one year), and expertise, all of which reflected interviewees' credibility in regard to the policy implementation process. Another inclusive criterion for selecting potential participants considered to be SLPEs was their active role in promoting the use of digital technology strategies for migrant health risk communication policy implementation. Mintrom (2019) and Mintrom, Maurya, and He (2020) suggested that the actors who have entrepreneurship qualities are those who wish to challenge the status quo by transforming policy ideas into policy innovations to improve policy practices. Indeed, actors with entrepreneurial attributes and skills alone are not sufficient to be categorized as policy entrepreneurs; rather, they must have an active role and be prone to use their qualities to invest resources for policy change or improvement (Petridou & Mintrom, 2021). To fulfil this criterion, the researcher approached colleagues who worked in local areas to be gatekeepers for screening potential interviewees who met all of the criteria. The details of the 24 participants are shown in Table 2.

Finally, the study used triangulation techniques to ensure the accuracy of the research data by interviewing policy agents from different roles, organizations, and locations (Clark et al., 2021). Interviews were conducted with different interviewees who had different roles and backgrounds, which was useful for maintaining the research's confirmability and credibility. The interview questions were submitted to the examiners for methodological quality checking, and pilot interviews were conducted to enhance the clarity of the interview guide. The researcher also conducted an audit trail and took reflective notes after the interview to guarantee the data's confirmability (Lincoln & Guba, 1985). The interview guide probed the different contextual issues which SLPEs experienced in promoting the use of digital technology strategies for migrant health risk communication policy implementation among migrants in the two provinces.

All interview data was analysed by applying the thematic analysis process steps proposed by Braun and Clarke (2022). This research applied two coding approaches: inductive and deductive (Braun & Clarke, 2022). Deductive (or concept-driven) coding starts with a predefined group of codes or themes that emerges from the conceptual framework to code the data. It is a useful coding method for exploring deeper into SLPEs' experiences and perspectives that influence their thoughts towards social phenomena. Inductive (or open) coding is used to examine the code and the themes that emerge from the data itself. It is useful for researchers in probing inside the data, as well as providing new perspectives or examples to answer research questions.

In this study, the deductive coding approach was used to concentrate on the context of interviews which was relevant to answering the study questions and was guided by the conceptual framework. Inductive coding aimed to uncover the code that was derived from comparative analysis of the different interview data.

NVivo 12 Pro software was also used to uncover the participants' experiences through the encoding process by organizing the data into main themes and sub-themes and then interpreting the data with the framework. The analysis and interpretation of the data focused on the themes and sub-themes presented in Table 1. Finally, this research was granted ethical approval from the Naresuan University Institutional Review Board COA No. 355/2022, IRB No. P2-0271/2565. The study was funded by Naresuan University (R2566C006).

Table 1 Summary of the conceptual framework

The stages and the implementation streams	Attributes	Skills	Strategies
<p>Stage 1 Planning</p> <p>The problem stream explores how policy actors define the policy problems and the choice of solutions for the implementation activities.</p> <p>The politics stream investigates how actors compete to achieve their proposed problem definition and to have their suggested solutions endorsed.</p> <p>Stage 2 Operating</p> <p>The process stream highlights the relationship and scope of working among actors in implementing the policy.</p> <p>The program stream explores the implementation activities of the different actors in shaping the implementation program.</p>	<p>Ambition is the willingness of actors to invest resources for a future return.</p> <p>Social acuity is the capability to understand complex policy contexts and other actors' needs.</p> <p>Credibility is the ability to attract others to work based on authority or a good track record.</p> <p>Sociability is the ability to empathize with others and understand other people's needs. This is used to expand the network and build allies in order to promote policy innovation.</p> <p>Tenacity is the willingness to continuously work through difficulties to achieve a goal.</p>	<p>Strategic thinking deploys a plan that is determined to pursue the goal.</p> <p>Team building is working as a team to share ideas and resources for strategy.</p> <p>Networking is a skill in expanding policy networks spanning across different venues in order to promote policy change.</p> <p>Collecting evidence is the skill in collecting information to promote policy change.</p> <p>Making arguments is the skill of making tactical argumentation to promote policy solutions and form coalitions among supporters.</p> <p>Negotiation is a communication skill for winning support and mitigating conflict.</p> <p>Engaging with multiple audiences is a skill for synthesizing knowledge and disseminating information to change others' beliefs and gain their support.</p>	<p>Problem framing is telling a story about a problem that needs to be paid attention to and solved.</p> <p>Using and expanding networks is gaining support and disseminating ideas.</p> <p>Working with advocacy coalitions is done to mobilize collective action and coordination among multiple stakeholders.</p> <p>Leading by example aims to minimize the perception of risk regarding policy change among allies.</p> <p>Scaling up change processes is a strategy to inspire policy change for other jurisdictions to adopt.</p>

Sources: Adapted from Howlett (2019); Howlett, Ramesh, and Perl (2020); Mintrom (2019)

Table 2 Details of participants

The participant number and organization	Overarching role	Tak	Phetchabun
The head of public health administration from a local hospital (LH) or sub–district health promoting hospital (SDHPH)	1. Responsible for health communication planning. 2. Promoting and monitoring the use of digital technology for health risk policy implementation.	LH (1) SDHPH (1)	LH (1) SDHPH (2)
Health professionals from the local hospital	1. Health communication providers (content creators and monitoring migrant concerns). 2. Adapting digital technology to enhance the effectiveness of health risk communication policy implementation at the district level.	Nurses (2) Public Health Allies (3)	Nurses (1) Public Health Allies (2)
Health professionals from the sub–district health promoting hospital	1. Health communication providers (content creators and monitoring migrant concerns). 2. Adapting digital technology to enhance the effectiveness of health risk communication policy implementation at the sub–district level.	Public Health Allies (2)	Nurses (1) Public Health Allies (2)

Table 2 (Continued)

The participant number and organization	Overarching role	Tak	Phetchabun
Volunteers (Thai and migrant health volunteers and NGO staff)	<p>Support health officers in using digital technology for health risk communication policy implementation.</p> <ul style="list-style-type: none"> • The local NGO staff are volunteers from local voluntary organizations that work on migrant and refugee welfare issues. They were recruited and introduced by health professionals from either the LH or SDHPH. • Thai and migrant health volunteers are the ordinary Thai and documented migrants who have joined the health promotion team and were trained by the local health providers from SDHPH. 	<p>Thai (1) Migrant (1) NGO (1)</p>	<p>Thai (1) Migrant (1) NGO (1)</p>
Total: 24 participants		12	12

Source: Author’s elaboration

Research results

This study found that all interviewees described attributes, skills, and strategies that counted as entrepreneurial based on the literature of policy entrepreneurship. Having been assured that SLBs and SLQBs can be policy entrepreneurs, this study discovered the conditions under which such SLPEs adopt policy entrepreneurial qualities and practices.

It was also found that the distinction between ordinary policy actors and SLPEs is evidenced not only by their roles in promoting innovative ideas for policy change, but also because all interviewees in this research defined themselves as committed local policy actors who aim to promote digital technology strategies for migrant health communication policy implementation. This revealed attempts to influence policy outcomes and also actively participate in efforts to improve the policy even while facing implementation challenges from a pandemic.

Investigating their policy practices, this section begins with an analysis of the first stage of policy analysis, which focuses on the problem stream and the politics stream. Then, it describes the results of the second stage which includes the process and program stream of the policy implementation.

Planning for policy implementation

The implementation planning stage consists of the problem stream and the politics stream. The problem stream considers how the SLPEs use their strategies, attributes, and skills to define or to shape their preferred policy implementation problem, and then compete with each other in order to get their preferred policy implementation problem definition adopted in the political stream.

Phetchabun

This study found that in the problem stream, all heads of public health administrators and all health allies from the LH and SDHPH in Phetchabun used a problem framing strategy and worked with advocacy coalition strategies to argue for the need to promote two levels of digital technology promotion strategies for migrant health risk communication. The first level is utilization among state agents for implementation planning, and the second level is the utilization of technology between service providers and migrants. To come up with the two levels of digital technology utilization for policy implementation, it was found that the heads of the LH and SDHPH, together with their frontline staffs, became the main SLPEs who activated all possible allies, ranked from other local administrators to the migrant employers in Phetchabun, by inviting them to design implementation activities and investing resources in order to build the digital migrant health risk

communication systems. Indeed, other existing research has revealed that the efforts of local governmental health networks played a paramount role in COVID-19 control strategies under the Communicable Disease Act which reflects the cross-hierarchical allies (Sudhipongpracha & Poocharoen, 2021; Kosiyaporn et al., 2022). However, this research further discovered that migrants' employers became important actors who helped the health policy entrepreneurs in collecting data on digital migrant health behaviour and in designing the appropriate content and channels for migrant workers and their families. This illustrates the cross-sectorial coalition strategies that helped the health workers as SLPEs to attain important social capital for SLPE practices and successful policy implementation.

“Because we do not know about their digital communication behaviour and we lack money to collect the data on their behaviour, I look for the migrant employers who can help us... making new networks to helps us implement the policy”

(The head of LH_Phetchabun, Interview, November 20, 2022)

This reflects the skills of engaging multiple audiences and team building skills of the health workers as SLPEs in Phetchabun. Tenacity attributes were discovered and highlighted among all Phetchabun actors once they described the beginning stages of their digital technology promotion for migrant health risk communication. However, this study found that there were many arguments among different SLPEs' allies in Phetchabun due to the different views about investing in digital migrant health communication strategies. One nurse mentioned that,

“We had a highly conflicted discussion on the worthiness of digital migrant health communication. We did not have this system before; it requires us to invest our money and hire people to help us in the operation...However, we lack power on the decision

making....so we have to contact poo yai (high-level authorities) like local politicians to support us by using personal connections to ask for their money; especially during COVID-19, people do not give us support easily.”

(Nurse1_LH_Phetchabun, Interview, November 17, 2022)

To gain support for this problem definition within the politics stream, the local health administrators in Phetchabun also made efforts to build coalitions with local politicians who shared their views on the problem definition. This strategy helped health actors as SLPEs to overcome the disadvantage of lacking access to high-level decision makers and powerful supporters (Lavee & Cohen, 2019). Indeed, working with local elite coalitions and bureaucratic groups who have different roles and expertise requires negotiation and argument-making skills to grab the attention of the elite actors. All heads of public health administrators relied on their personal connections with all local government stakeholders who had authority and power to make migrant health policy decisions. This was because they shared previous working experiences or had close-kin relationships. The examples include coalitions between health workers and politicians, as seen in the following quote: “We asked our colleagues to identify who are the close people with the politicians, asked our boss to initiate an online meeting for a different group of politicians... find the people who they know and trust, increasing the chance of winning the support.” (Public Health Allies1_SDHPH_Phetchabun, Interview, November 16, 2022). This reflects the Thai cultural and organizational conditions in the creation of opportunities by SLPEs in policy implementation (Chamchong, 2021).

This study also found that all health actors and NGO staffs as SLPEs in Phetchabun understood the importance of public pressure on politicians. Indeed, the health professionals from the LH and SDHPH, together with the NGOs in Phetchabun, built coalitions with local residents and migrant employers to join their meeting in order to convince the politicians for support. As one SLPE argued:

“We invited the hard-core civilians who are supporters of migrant welfare and the migrant employers who own big companies to a meeting and prepared them and asked them to support us and asked them to convince the politicians. Indeed, the politicians and many poo yai (high-ranking authorities) could not discount them.”

(NGO1_Phetchabun, Interview, November 18, 2022)

Then, the heads of the LH and SDHPH suggested that they had to be careful in selecting evidence, providing a good summary, and not bombarding them with technical information to grab other potential supporters and allow them to frame the problem definition in the same direction (The head of SDHPH1_Phetchabun, Interview, November 16, 2022; the head of LH_Phetchabun, Interview, November 20, 2022). The online meetings became discussion forums which gathered all relevant local government stakeholders to join the problem definition process and set the implementation agenda. These personal connections and their credibility become an important attribute supporting their influential position in order to attract other local agents to work with them and mitigate disagreement among different SLPEs. All of which reflect the way the SLPEs in Phetchabun gain the entrepreneurial capital.

Tak

Tak has already implemented two levels of digital communication for migrant health communication similar to the problematized ones in Phetchabun. The first level is utilization among state agents for implementation planning, and the second level is the utilization of technology between service providers and migrants. This study found that all Tak health professional actors as SLPEs faced implementation challenges due to limited resources and funding in promoting the use of digital technology strategies on a greater scale compared to Phetchabun. This was because the cross-border health context between Tak and Myanmar led to a high concentration of undocumented migrant patients with COVID-19. The local NGO staff also underlined that both documented and

undocumented migrants use smartphones to get information on crossing the border, and many received COVID-19 news from social media. However, the undocumented migrants were described as having poor health literacy, often encountering COVID-19 misinformation, which led to poor health behaviour (NGO1_Tak, Interview, January 27, 2023).

Three conditions were found leading to poor health communication behaviour among undocumented migrants. First, most undocumented migrants were members of minority groups who speak different ethnic languages, and it was difficult for trained migrant health volunteers (who know Burmese) or health workers to communicate with them. Second, these undocumented migrants were illegally smuggled across Thai borders due to the conflict in Myanmar and were, therefore, afraid to contact Thai authorities because of deportation concerns. This caused difficulties for Tak health providers in reaching and communicating with them. Finally, there was a lack of budget and manpower for researching this undocumented migrant communication behaviour (Nurse2_LH_Tak, Interview, January 26, 2023). Undocumented migrants, on the other hand, were enrolled in migrant health insurance schemes and received digital health information created by Thai health workers, employers, and their health volunteers (NGO1_Tak, Interview, January 27, 2023).

To solve this problem, these SLPEs in Tak opened online forums and invited all governmental and non-governmental actors to join the forums and discuss this problem. Online forums become platforms for SLPEs to gain the understanding of other stakeholders in order to negotiate for their support. Lavee and Cohen (2019) argued that one important entrepreneurial strategy is to gain knowledge of what other stakeholders need and of the expectations on SLPEs. This demonstrates the social acuity attributes of SLPEs.

This research also found that most health workers as SLPEs in Tak enhanced their intellectual capital before joining the forum by using two methods. First, some participated in ad hoc online forums to gain knowledge about international organizations (IOs) and international non-governmental organizations (INGOs) funding: “I attended an online forum organized by the IOs and INGOs

with other NGO friends to get a sense how to bid for money and craft a funding proposal to gain their attention and get support from them” (Public Health Allies2_SDHPH_Tak, January 30, 2023). Second, they attended an online short course provided by universities to gain knowledge on how to create digital health content. Arnold (2015) recommends that SLPEs should have intellectual capital to influence policy change. This reflects the condition in which SLPEs found themselves lacking knowledge to address policy challenges. Therefore, they tended to adopt policy entrepreneurial strategies (Lavee & Cohen, 2019).

At the planning stage for policy implementation in Tak, the use of local health entrepreneurs’ engaging with multiple audiences’ skills was also displayed in recruiting new actors to support their implementation agenda. Undoubtedly, a successful SLPE should have their own political capital by being aware of the specific political institution or groups that might help to improve the policy (Mintrom & Luetjens, 2017). Owing to this, the health frontline workers as SLPEs from the SDHPH and LH used the problem-framing strategy to portray Tak as a border province experiencing severe COVID-19 outbreaks due to illegal cross-border migrants from Myanmar. They introduced the strategy of ‘A Quick-Win Solution’ which referred to gaining resources and funding support from other influential actors, such as national governments, foreign NGOs, and IOs, to buy software communication programs or smart phones, and then hiring workers and linguistic experts to observe online migrant health risk communication behaviour. Overall, the ‘A Quick-Win Solution’ strategy was introduced in order to gain resource support from the international policy agencies, and then use those resources to promote the operation of the first- and second-level digital technology promotion. Indeed, the SLPEs in Tak also framed the agenda items as national or international issues which also reflects the sociability attribute through gaining alliances with other influential actors. It became a third level of digital migrant health communication strategy in the problem stream which all Tak actors agreed to introduce.

To gain support for this problem definition, it was found that the SLPEs, especially the heads of public health administration in Tak, also worked hard to increase their political skills in negotiations with powerful actors by learning from and consulting with their academic networks at the universities and from the NGOs who had experience in working with IOs or INGOs. Moreover, the heads, together with their health workers, arranged consulting forums which helped them to develop their making argument skills and negotiation skills through the scaling up change process strategy.

“I and my colleagues just realized that we must act in a bigger political arena to solve these cross-border problems. We are very small people, who dream big. So, we learn political skills and... how to write good argument proposals and even crafted our province as the red zone to call for support ... made us feel we are somebody who can have a voice, which had been silenced.”

(Public Health Allies2_LH_Tak, January 29, 2023).

In sum, the small elite circle of authorities in Phetchabun was useful for operating an implementation agenda which proceeded in the same direction. It was also found that all frontline workers had their personal connections with the elite circles within the province and could voice their concerns in order to address problems. This led to successful policy implementation and less conflict among SLPEs in Phetchabun, demonstrating good social capital and political capital among SLPEs with other local political inner circles while Tak's problem definition came from a consensus among different groups of SLPEs and other external actors. The planning process in Tak reflected how each SLPE used their qualities to gain the essential intellectual, political, and social capital in order to play a role in a bigger policy arena and build allies with international bodies, all of which was done to advance their policy problem definition to be part of

a national or international implementation agenda. This reveals an important aspect of how SLPEs must recognize the opportunities to act and how to use their attributes, skills, and strategies for better policy implementation and practices (Mintrom, 2019).

The operation of policy implementation

The final stage of policy implementation presents the process and program streams as well as the policy implementation challenges. Within the process stream, it was found that Tak and Phetchabun used the same relationship guidelines to promote the first and second level of digital technology promotion strategies for migrant health risk communication policy implementation while Tak added a third level of digital technology promotion strategy in order to cope with their cross-border health issues.

The first and second level of digital technology promotion

For the first and second level of digital technology promotion, it was found that within the process stream the head of public health administration in both provinces used problem-framing strategies to convince other stakeholders to integrate and share local financial and human resources for policy operation. Indeed, SLPEs have lower-level positions and have far fewer resources than other elite policy actors (Gofen, Lotta & Marchesini da Costa, 2021). Therefore, the SLPEs have to use entrepreneurial qualities and practices to bypass this disadvantage in setting up relationship guidelines for policy implementation in the process stream. This research found that all health entrepreneurs in both provinces used their authority and position as experts to demonstrate their credibility in order to gain trust from other stakeholders, such as migrants' employers, high-ranking officers from the central government and local politicians, to support digital technology investment for migrant health communication. All SLPEs in the two provinces applied the strategy of working with an advocacy coalition with local elite and bureaucratic circles to support collective action by inviting stakeholders from different local governmental institutions and the private sector to design implementation activities and a resource allocation plan.

Indeed, the key aspect of the success of this working relationship arrangement in the process stream within the two provinces came from the personal relationships among heads and other elite groups. The advantage of small but powerful working groups is a useful tool in supporting SLPEs to set up policy relationship guidelines in the process stream, which mitigates delays in arranging tasks of policy implementation among the SLPEs and their networks (Public Health Allies2_ SDHPH _Phetchabun, Interview, November 18, 2022; Nurse1_LH_Tak, Interview, January 28, 2023).

The SLPEs in both provinces used networking skills by sharing their ideas, perspectives, and evidence with other actors, like migrants' employers, to recruit potential allies to accept their policy relationship guidelines as well as improve their allies' knowledge to promote digital communication with migrants. In comparison with ordinary policy actors, SLPEs do not hesitate to offer knowledge and transfer their professional skills to others (Lavee & Cohen, 2019). This research even found that some SLPEs in both provinces also shared their mistakes in order to gain trust from others. As one SLPE explained:

“It is important to accept and share our mistakes with the public for their education. This helps in gaining trust with them and convincing them to promote the first and second level of communication especially among migrants' employers and active citizens who can help us with migrant online communication.... We should not bombard them with information but rather tell them the story and what we have done, including mistakes that we made.”

(Head of LH_Tak, Interview, January 30, 2023).

Sharing knowledge from mistakes rather than avoiding blame is a complex art that makes SLPEs differ from other policy stakeholders (Cairney, 2018; Lavee & Cohen, 2019). Therefore, these SLPEs also used migrant health outbreak

data and shared the experiences of frontline struggles as evidence to synthesize knowledge and disseminate information to gain support. This reflects the collecting evidence skill to promote the first and second level of digital technology strategies for migrant health risk communication policy implementation. The SLPEs must invest effort and time to promote to their networks, the knowledge, and proposed guidelines as a solution (Mintrom, 2015) for digital migrant health communication. This research found three methods were employed by the SLPEs from both provinces in providing knowledge to their allies in order to enhance intellectual capital. Those methods included first, organizing an online workshop with migrant employers and migrants; second, developing a non-academic course on digital health communication for all stakeholders, and finally, arranging a meeting with the high-level government actors to exchange news and ideas towards digital migrant health protocol.

However, there were some differences between Tak and Phetchabun in promoting the digital technology promotion strategies for migrant health risk communication policy implementation in the program stream. Even though, SLPEs from both provinces shared similar patterns of program operation by asking for funding support from the provincial or sub-district offices to hire professional translators and health volunteers to produce media and collect data on migrants' digital communication behaviour. However, the difference was that health professionals as SLPEs in Phetchabun used their personal networks with migrant employers and representatives from local labor offices to help them run activities in the program stream, while in Tak, they relied on their long-term institution-to-institution networks to support the NGOs and local health volunteers. This marked the difference between the two provinces, which can be clearly seen through the third-level technology promotion in Tak.

Moreover, some differences were also found between Tak and Phetchabun in promoting the second level of digital technology promotion. Within the Phetchabun program stream, the SLPEs had relied on their personal connections for the policy implementation. There were fewer challenges due to the smaller number of irregular migrants who worked and lived in the province. It was much easier

to identify migrants and understand them because most of them could speak Thai or English and many came from Laos PDR, so there were fewer linguistic barriers in Phetchabun (Thai Volunteer1_Phetchabun, Interview, November 17, 2023). Therefore, in the program stream, the SLPEs also included migrants as part of the team for digital technology promotion for migrant health communication. The health entrepreneurs, volunteers, and migrant employers also provided an incentive for ordinary migrant partners who could help develop and support good digital communication practices between migrants and health providers. Then, the heads summarized the lessons learned and shared these with other health communities within the province. This demonstrates the leading by example strategy which demonstrated feasible policy practices for building trust and enhancing credibility to promote the use of digital technology strategy for migrant health risk communication operations.

In contrast, the SLPEs in Tak were challenged in promoting the use of a digital technology strategy on a greater scale compared with those in Phetchabun. The different aspects of the context in Tak were highlighted in the problem stream. It was found that all SLPEs in Tak agreed on the impossibility of relying on provincial operation and supporting the policy change due to the difficulties in dealing with cross-border migrant health issues and other migrant communication challenges. Moreover, the SLPEs in Tak also held the view that migrant health issues in border areas should be solved by upgrading the local policy agenda to become a part of national and international agendas. There was no engagement of ordinary migrants taking part in operational teams, unlike in Phetchabun. The health professionals as SLPEs still struggled to understand the digital communication behaviour among migrants due to linguistic gaps and difficulties in identifying undocumented migrants living in isolated communities (Nurse2_LH_Tak, Interview, January 26, 2023; Public Health Allies1_SDHPH_Tak, Interview, January 29, 2022). In the program stream, Tak health entrepreneurs used the expanding networks strategy to gain support by engaging with multiple audiences via formal institutional collaboration to research migrant health communication behaviour and design appropriate communication responses. However, volunteers

and NGO staff disagreed and argued that this strategy took time in terms of grabbing other agents' attention and reaching a consensus, thereby causing delays in promoting the policy implementation. This became a main policy implementation challenge for SLPEs to deal with which pushed Tak SLPEs to advance their policy implementation to the next level.

The third level of digital technology promotion

The differences between Tak and Phetchabun included the fact that all Tak SLPEs were also focused on arranging working guidelines for the third level of digital technology promotion or 'A Quick Win Solution' approach. A 'Quick-Win Solution' strategy was applied to gain resource support from international policy agencies, and then use those resources to promote the operation of the first-and second-level digital technology promotion for migrant health risk communication policy implementation in the program stream. Perhaps, a context such as a pandemic as an organizational context encourages SLPEs to actively introduce innovation (Gofen, Lotta & Marchesini da Costa, 2021). Certainly, many service providers may find political engagement not only a valuable endeavor, but also a compelling one (Weiss-Gal, 2016). Hence, in designing working guidelines, all heads of public health administration in Tak employed a problem-framing strategy with their argument-making skills to highlight the issues as part of the national and international agenda that required multiple audiences' collaboration to design the implementation of working guidelines and implementation activities (The head of LH_Tak, Interview, January 30, 2023; The head of SDHPH_Tak, Interview, January 29, 2023). This study also found that this idea was supported by evidence collected from the collaboration between frontline workers from the LH and SDHPH and the health volunteers. In the program stream, this argument was presented by the head of public health administration from the LH or SDHPH via online discussion forums, which invited representatives from the MoPH, and experts from governmental research institutes, academia, IOs, INGOs, and NGOs to set implementation activity guidelines and call for voluntary resource support at the program level.

In fact, Tak has existing long-term institution-to-institution collaboration on migrant health issues, especially in the area of tropical disease control. However, digital technology for migrant health communication has never reached the implementation agenda before due to the complications of the government procurement system and a lack of actors who would like to be migrant digital communication leaders. (Head of LH_Tak, Interview, January 30, 2023). Subsequently, tenacity can be seen in the SLPEs' effort and willingness to push 'A Quick-Win Solution strategy' as the third level of digital technology promotion for migrant health risk communication, and as a part of a national and international agenda.

Finally, another tactic which was utilized among the head of SLPEs in Tak was collaboration on research with universities so that they could present their challenges and disseminate their research findings on policy implementation challenges through academic and professional forums in order to gain support. Indeed, this was used as evidence to convince other policy partners to form coalitions with them. However, the Tak SLPE suggested that using this tactic required a lot of strategic thinking skills in the program stream because in the presentation of research results about the working challenges to the public, criticizing their allies or revealing mistakes or conflicts during policy implementation cannot be avoided, all of which could lead to poor collaboration and conflict among policy allies. (Nurse1_LH_Tak, Interview, January 28, 2023). Hence, it is important to consider the right frame of time and the context of policy collaborations as well as the person's credibility in using these tactics.

Conclusion and discussion

The purpose of this research was to probe into the street-level policy entrepreneurs' (SLPEs) strategies, attributes, and skills in promoting the use of digital technology strategies for migrant health risk communication policy implementation in Phetchabun and Tak provinces. It was found that the difference between SLPEs and ordinary actors was evidenced not only by their roles in promoting innovative ideas for policy improvements, but also because all

interviewees in this research defined themselves as committed local policy actors who aim to promote digital technologies for migrant health communication. This demonstrates their endeavors to influence policy outcomes and also actively participate in efforts to improve the policy even when facing implementation challenges from a pandemic. All of this reflects policy entrepreneurs' unique qualities demonstrated through their positions as active actors who make efforts to invest their time, reputation, and work to pursue policy solutions in their favor (Navot & Cohen, 2015).

This study contributes to the knowledge on how policy entrepreneurs utilize their strategies, skills, and attributes to promote an implementation agenda during a public health crisis. Indeed, research on entrepreneurship during crises is rare compared with research on policy entrepreneur studies in normal times (Gofen, Lotta & Marchesini da Costa, 2021). These results showed that the pandemic became the main condition that accelerated policy actors' transformation of themselves into SLPEs and, indeed, to adopt entrepreneurial practices and qualities. This is supported by Lavee and Cohen (2019) who uncovered that, when SLBs perceive crisis situations or sense threats, they tend to exercise policy entrepreneurship. Certainly, this study discovered that SLPEs viewed the COVID-19 pandemic as a new and significant challenge that disrupted normal policy practices and required agile and innovative practices from SLPEs. SLPEs introduced different levels of digital technology promotion for migrant health risk communication policy implementation with each level displaying different utilization of attributes, skills, and strategies.

First, the SLPEs in both provinces promoted two levels of digital technology use for migrant health risk communication. The first strategic level involved utilization among state agents for implementation planning, and the second strategic level consisted of the utilization of technology between service providers and migrants. Tak offered an additional third level of digital technology promotion in order to gather powerful actors like international funders and high-ranking government institutions for resource support to implement the first and second level of digital technology promotion. This is because Tak is located

on the border, and the SLPEs struggled with the large number of migrant patients, irregular cross-border migration situations, and communication with ethnic minority groups which led to challenges in implementing the policy and understanding the behaviour of digital migrant health communication in Tak. There were fewer challenges in Phetchabun. It was easier to design digital technology promotion for digital migrant health communication. Indeed, the choices of SLPEs in these provinces were influenced by the policy environment (Aviram, Cohen & Beerli, 2019).

Secondly, this study found that SLPEs in both Tak and Phetchabun used the same strategies to promote the first and second level of digital technology use for migrant health communication policy implementation. One important strategy was to form cross-hierarchical and cross-sectorial coalitions with different policy stakeholders. This revealed the SLPEs efforts to overcome their disadvantages, which were rooted in their lower-level positions and their distance from the powerful decision makers, by using their networking skills in order to form coalitions (Arnold, 2015).

For cross-hierarchical coalitions, the SLPEs in Phetchabun were working with local elite coalitions and bureaucratic groups based on their personal connections. This was done in order to influence policy decisions. Indeed, working with small groups of powerful elites is done at the final stages in order to reduce the number of veto points and mitigate the conflicts among SLPEs. This evidence of practice revealed how the SLPEs enlisted strategies to shift their policy implementation agenda and gain support or avoid as many veto points from other actors as possible (Mintrom & Norman, 2009). Perhaps, these SLPEs understood their limited direct influence in the large, crowded policy arena, but realized that they could have a greater impact in smaller and less competitive venues. Similar to Cairney (2018), this suggests that policy entrepreneurs may consider how to 'surf the waves' rather than 'control the sea'. While, the cross-hierarchical coalitions in Tak were built upon different groups of SLPEs and other external actors. The SLPEs used their qualities to gain the essential entrepreneurial capital in order to play a role in a bigger policy arena

and build allies with international bodies. This was because the SLPEs in Tak were challenged in promoting the use of a digital technology strategy on a greater scale. As Arnold, Nguyen Long, & Gottlieb (2017) suggested that policy entrepreneurs who engaged a larger coalition of allies tended to attain more policy success. This marked the difference between the two provinces.

Regarding cross-sectoral coalitions, SLPEs in both provinces also developed alliances with active citizens, migrant employers and their academic networks to pressure decision-makers in order to shape the digital promotion agenda. This reveals the skills of the SLPEs in networking and engaging multiple audiences in expanding networks of influence (Mintrom, 2019). The SLPEs in both provinces implemented networking skills by sharing their ideas, perspectives, evidence, and even their mistakes with other actors in order to gain trust and recruit potential allies. Translating to the evidence of practices, trust during the crisis became a key asset in gaining support in shaping the policy implementation direction. The SLPEs did not hesitate to offer knowledge, share their mistakes, and transfer their professional skills to others (Lavee & Cohen, 2019). This highlights the qualities of policy entrepreneurs as persistent actors who take risks with their assets and reputation to push forward their preferred policy agenda (Aviram, Cohen & Beeri, 2019).

Thirdly, at the operational stage, the groups of SLPEs in Phetchabun still relied on their personal networks with migrant employers and representatives from local labor offices to help them run activities while the SLPEs in Tak used their long-term institution-to-institution networks. This was because Tak was challenged in promoting the use of a digital technology strategy on a greater scale due to the unique border health conditions.

All SLPEs in Tak agreed on the impossibility of relying on provincial operations in supporting policy implementation. Thus, the SLPEs in Tak introduced a third level of digital technology promotion in order to upgrade the local policy agenda to be part of the national and international agenda, to gain support from powerful actors or new allies to promote their implementation agenda, reflecting the tenacity attribute (Mintrom, 2019). This illustrates the effort of the micro-level

of SLPEs' practices in trying to push a macro-level policy agenda, which is a quality of policy entrepreneurs (Lavee & Cohen, 2019). In order to deal with powerful national and global institutions, Tak SLPEs were found to use different methods to improve their intellectual skills, entrepreneurial capital, and political tactics. This aligns with Arnold (2015) who argued that actors who are successful SLPEs require intellectual capital, social capital, and political capital.

For the theoretical contribution, this research extends policy entrepreneurial theory beyond agenda or legislative settings. Moreover, research on policy entrepreneurship is commonly focused on the performance of individuals especially among political leaders or chief executive officers (such as Taylor et al., 2023), while studies on groups of street-level policy entrepreneurs are underexamined (Zeigermann, 2020). Hence, this research filled this gap by investigating the work of groups of Street-level-Bureaucrats (SLBs) and Street-level Quasi-Bureaucrats (SLQBs) as SLPEs which revealed their entrepreneurial qualities to promote digital technology for migrant health risk communication. This reveals the collective efforts of low-level bureaucrats in promoting their preferred policy implementation agenda.

Finally, this study still has several limitations, as the results may not include all of the strategies, skills, and attributes utilized by SLPEs in promoting digital technology for migrant health risk communication policy implementation. However, Lavee and Cohen (2019) suggested that it is essential to conduct in-depth studies on strategies, skills, and attributes of policy entrepreneurs, the practices between them, and the specific policy context. As a comparative case study, the phenomena in this research that have been demonstrated have specific time and policy implications. Thus, it is difficult to generalize findings to other contexts. Perhaps future research should explore the practices, strategies, and skills that SLPEs adopt in other policy domains. Moreover, future comparative research is needed to evaluate the skills, attributes, and strategies, which can be assessed by a comparison over time or across jurisdictions. Perhaps, moving on to policy debates from state-centric implementation to governance, there are more actors engaged in implementing policy today. Future studies should

comparatively analyse the role and behaviour of active citizens, the private sector, and NGOs regarding the aspects of private policy entrepreneurs related to policy implementation during a public health crisis.

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