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Journal Pre-proof

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PII: S0742-051X(23)00039-2

DOI: <https://doi.org/10.1016/j.tate.2023.104051>

Reference: TATE 104051

To appear in: *Teaching and Teacher Education*

Received Date: 5 January 2022

Revised Date: 30 December 2022

Accepted Date: 30 January 2023

Please cite this article as: Yang, M., Oh, Y., Lim, S., Kim, T., Teaching with resilience during the COVID-19 pandemic: Korean teachers and collective professionalism, *Teaching and Teacher Education* (2023), doi: <https://doi.org/10.1016/j.tate.2023.104051>.

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Teaching with Resilience during the COVID-19 Pandemic:

Korean Teachers and Collective Professionalism

Minseok Yang¹, Yujin Oh^{2,3*}, Sunbin Lim⁴, Taeyeon Kim⁵

Authors' Note

All authors contributed equally to this work. Authorship is equally shared.

Abstract

This study applies system-focused resilience and collaborative professionalism to examine how teachers in Korea collectively developed resilience and transformed teaching during COVID-19. Using qualitative data from seven individual interviews and four focus groups, we found Korean teachers navigated complex challenges (rapidly changing policies, online teaching, exacerbated learning gaps, and excessive social pressure) and utilized contextual resources (collective autonomy and flexibility, solidity and solidarity, and collective responsibility) to develop strategies (collaborative inquiry, timely communication, and envisioning the future of schooling). The study extends teacher resilience toward more collective and communal, from the individual level, by linking resilience to collaborative systemic changes.

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Keywords: teacher resilience, collective resilience, collaborative professionalism, COVID-19, Korean education

Highlights

- Korean teachers show *transformability* as a critical element of resilience during COVID-19.
- Contextual resources are mobilized to develop strategies for teachers to overcome unexpected challenges.
- Collaborative professionalism is the key to building collective resilience in the teaching profession.
- The conception of teacher resilience needs to be expanded as collective and communal forms beyond the individual level.
- Collective resilience strengthens long-term teacher development and sustains the teaching profession.

Funding

Data collection of this study was partially supported by Delia Koo Global Student Scholarship from the Asian Studies Center at Michigan State University.

TEACHING WITH COLLECTIVE RESILIENCE DURING COVID-19**Teaching with Collective Resilience during COVID-19:
Korean Teachers and Collaborative Professionalism****Abstract**

This study applies system-focused resilience and collaborative professionalism to examine how teachers in Korea collectively developed resilience and transformed teaching during COVID-19. Using qualitative data from seven individual interviews and four focus groups, we found Korean teachers navigated complex challenges (rapidly changing policies, online teaching, exacerbated learning gaps, and excessive social pressure) and utilized contextual resources (collective autonomy and flexibility, solidity and solidarity, and collective responsibility) to develop strategies (collaborative inquiry, timely communication, and envisioning future schooling). The study extends current conceptions of teacher resilience toward more collective and communal by linking resilience to collaborative professionalism and systemic changes.

Keywords: teacher resilience, collective resilience, collaborative professionalism, COVID-19, Korean education

TEACHING WITH COLLECTIVE RESILIENCE DURING COVID-19**Introduction**

Teachers have been significantly burdened by the uncertainty and unexpected changes in schooling brought on by the COVID-19 pandemic. This external crisis of COVID-19 exacerbated the stress and burnout teachers often experience in non-crisis times, such as heavy workload, multi-tasking, lack of resources, and accountability pressures (Trinidad, 2021). When the pandemic spread in early 2020, teachers were forced to work at the “front-line” to keep schools running (Hart & Nash, 2020). They had to quickly and efficiently become agile policy actors to implement rapidly changing school policies and effective learners to attain new knowledge and skills for online and hybrid classes, all while acting as dedicated caregivers and supporting the diverse needs of students and their communities (Anderson et al., 2020; Authors, 2021a; Alvarez Gutiérrez et al., 2022). In addition to the daily infection-related health risks teachers took on in doing their jobs, these multiple demands further increased the emotional and physical burdens of teaching across the world (Sokal et al., 2020; Wong & Moorhouse, 2020).

The COVID-19 crisis required teachers to be resilient in sustaining their professional identities and core aspects of schooling by quickly and intentionally implementing changes in policy and praxis (Amir & Kant, 2018; Authors, 2021a). Teacher resilience has accordingly been recognized as a key element in transforming teaching and sustaining schooling for student learning in response to the pandemic (Hicks, 2021; Xun et al., 2021). Commonly theorized as the ability to “bounce back” from adverse situations (Mansfield et al., 2012), resilience has helped teachers thrive and grow as teaching professionals beyond just surviving adverse situations (Ebersöhn, 2014; Gu & Day, 2007). The spread of COVID-19 caused teachers to experience high levels of mental and emotional stress, job ambiguity, and burnout via school closures and lockdowns (Chan et al., 2021; L.Kim & Asbury, 2020; Pressley, 2021). At the same time,

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teachers exhibited “bounce back” in navigating these unprecedented challenges and made the adjustments necessary to sustain schooling, particularly in terms of online teaching (Sokal et al., 2020; Authors, 2021a), school reform through collective efficacy (Authors, 2021a, 2021b), and strategic resource allocation (Purwanto et al., 2020). Recent research has further shown inter-individual differences in teachers’ attitudes toward change (Sokal et al., 2020), how teachers used organizational resources to reduce burnout (Trinidad, 2021), and how they applied system-level learning communities and collective expertise during the pandemic (Authors, 2021a, 2021b). Yet, despite these insights, relatively little is known about how teachers’ collective resilience enabled rapid school transformations in response to the COVID-19 crisis.

The current study addresses this gap by exploring the aspect of *transformability* available through the collective form of teacher resilience because we witnessed notable changes teachers accomplished in their daily work, regardless of school level, region, or years of teaching experience—those forced changes due to COVID-19, such as shifting the idea of schooling from the conventional classroom settings to online classes. Teacher resilience in this sense cannot be fully understood with existing literature that focused on individual or personal level factors, but more with a systemic approach to exploring the multilayered aspects, such as interactions between individuals and contextual resources, strategy development, and outcomes that enable teacher growth and wellbeing (Beltman, 2015; Mansfield et al., 2016). This systemic approach to *teacher resilience as collective* necessitates critical consideration of collaborative professionalism (Hargreaves & O’Connor, 2017) as a means of achieving shared resilience among teachers, which could scale-up teacher resilience toward more collective and communal, from the individual level that existing studies on teacher resilience tended to focus on, while research in other fields highlighted resilience shared in community or group settings. This study

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thus extends current conceptions of teacher resilience by linking resilience to collaborative and systemic changes in schooling during times of crisis, which we define as collective resilience.

We specifically investigate how teachers in Korea developed collective resilience over the 2020 school year by transforming their teaching and schooling practices in response to the COVID-19 pandemic. We analyzed qualitative data collected from seven individual interviews and four focus groups with nine Korean teachers working at K-12 public schools and one teacher association representative to address the following research questions:

1. How did Korean teachers experience the challenges of implementing online and hybrid classes during COVID-19?
2. What resources did teachers utilize to overcome these challenges?
3. How did teachers develop strategies to collectively build resilience in transforming their teaching and schooling practices?

The Korean context offers a unique setting for understanding teacher resilience. Korean teachers in both public and private schools tend to stay in the profession for more than 30 years (Authors, 2021c). Maintaining their careers as professionals required them to overcome the challenges of schooling during a global pandemic and reconceptualize their roles as teachers in the long run. The pandemic disrupted the start of Korea's 2020 school year earlier than other countries since January 2020 (Authors, 2021b). Because the school year starts in March, policymakers, administrators, and teachers had to quickly re-plan the entire school year to offer online and hybrid classes (Ministry of Education, 2020). While schools in Korea did postpone the start of the 2020 school year by one month, there were no large-scale school closures during the school year like there were in other countries. Studies have reported Korean teachers exhibited collective efficacy, strong professionalism, and shared responsibility in implementing

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online classes and improving instruction during COVID-19 (Authors, 2021a, 2021b; Byun & Slavin, 2020). We thus argue that analyzing Korean teachers' development of collective resilience in response to rapidly changing pandemic school policies can critically inform how policymakers can strengthen teaching as a profession.

Guiding Perspectives

We drew on system-focused resilience to analyze how teachers used resources and developed strategies for addressing the challenges of COVID-19 (Mansfield, 2020; Mansfield et al., 2016). Our work was also guided by the concept of collaborative professionalism (Hargreaves & O'Connor, 2018a; 2018b), which informed the process of strategy construction and the outcomes of teacher resilience.

Teacher Resilience

Studies on teacher resilience have mainly explored how teachers navigate the profession under normalized conditions of burnout and stress (Gu & Day, 2007). Early research predominantly focused on the individual traits, capacities, and personal resources that foster teachers' well-being and professional longevity (Beltman et al., 2011; Pretsch et al., 2012; Skaalvik & Skaalvik, 2016). However, this person-focused perspective could not fully explain how school organizations and communities systemically support individuals. More recent studies have thus explored the multiple dimensions of resilience using a social-ecological viewpoint with a system-focused lens (Bobek, 2002; Castro et al., 2010; Mansfield et al., 2012). This dynamic, and interactive perspective has shed light on how teachers procure personal resources (e.g., self-efficacy, motivation, a sense of vocation, and previous knowledge) and contextual resources (e.g., social, cultural, and political networks) to develop strategies (e.g., professional learning, problem-solving, and reflection) for overcoming crises (Beltman et al., 2011; Ebersöhn, 2014;

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Gu & Li, 2013; Johnson et al., 2014; Mansfield et al., 2016). As both individuals and systems must enact intentional changes to maintain their identities, regular functions, and cope in the face of destabilizing shocks, transformability becomes especially salient to resilience in times of crisis (Amir & Kant, 2018). In such situations, resilience can result in positive outcomes, such as teachers' well-being, collective efficacy, job satisfaction, and commitment to the profession (Mansfield et al., 2016).

Beyond the individual level, teacher resilience has also been discussed at the collective level in terms of the teaching profession as a community. Teachers who encounter similarly fraught conditions have been shown to commiserate with fellow teachers on stress levels, share viable information and resources, and manifest resilience as a form of collective responsibility (Ebersöhn, 2012; Gu & Li, 2013; Oktari et al., 2018). In these situations, school leaders and education policies have played an essential role in building supportive environments and social networks for cultivating resilience at the organizational level (Gu, 2014; Johnson et al., 2014). In addition, studies utilizing a system-focused lens have argued that pre- and in-service training can effectively support teacher resilience and the wider profession through the adoption of specific programs, such as mindfulness or art-based reflection (Gratacós et al., 2021; Mansfield & Beltman, 2019; McKay & Barton, 2018; Schussler et al., 2018). These findings suggest multidimensional resources can be mobilized to collectively develop long-term strategies for strengthening teacher resilience and making sustainable changes to the profession.

While recent studies using a system-focused lens have shown resilience within schools to be a process, little is known about the mechanism of how teachers collectively utilize resources and develop strategies to lead changes as a form of resilience, particularly during unprecedented crises like the COVID-19 pandemic. In this sense, literature on community resilience offers

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possible ways for us to extend the concept of teacher resilience across and beyond schools, such as through partnerships and collaborations between communities and institutions in response to large scale crises and natural disasters (Fay et al., 2020; Okatari et al., 2018; South et al., 2020; Xie et al., 2022; Yip et al., 2021). Their findings suggest that transforming existing systems to meet urgent needs induced by large-scale crises like COVID-19 requires efficient and prompt communication of up-to-date information, the development and mobilization of resources via social capital (e.g., networks with collective responsibilities), and social connectedness.

Challenges of sustaining education during COVID-19 have been experienced by the entire teaching profession across the globe, beyond individuals and schools, although the degree to which individual teachers struggled with these challenges differs. This widely shared struggle required transformative systematic changes and such a situation calls for a more comprehensive understanding of teachers' *collective resilience*. The following section explores collaborative professionalism in the context of collectivizing teacher resilience.

Collaborative professionalism

Hargreaves and O'Connor (2017) posited the concept of collaborative professionalism, which builds on early understandings of teacher collaboration as a genuine means for improving school outcomes toward shared goals. Existing scholarship has conceptualized different forms of teacher collaboration, such as communities of practice (Wenger, 1998), learning organizations (Senge, 1990), and professional learning communities (Dufour & Eaker, 2009). Research has highlighted the benefits of teacher collaboration for students (Ronfeldt et al., 2015), teachers (Hargreaves & O'Connor, 2018a), and schools (Muckenthaler et al., 2020), suggesting that teachers develop individual and collective resilience through professional collaboration (Meister & Ahrens, 2011). Although previous studies on teacher learning have highlighted the importance

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of teacher collaboration, Hargreaves and O'Connor (2018a; 2018b) cautioned that not every form of collaboration is equally effective. For example, "contrived collegiality" under bureaucratic pressure does not always guarantee fruitful outcomes (Hargreaves & Dawe, 1990; Hargreaves, 2019). Additionally, collaboration can occur superficially and be unbeneficial when trust among teachers is low and structures and protocols are unclear. Therefore, collaborative professionalism can be understood as a more goal-oriented, intentional approach to collaborate.

Collaborative professionalism consists of two essential elements: solidarity and solidity (Hargreaves & O'Connor, 2018a). Solidarity, defined as a "sense of togetherness" (Hargreaves & O'Connor, 2018a, p. 21), allows teachers to share their lives in and out of school, construct shared beliefs, support one another, and sustain collaboration. Solidity, or specific designs (e.g., policy, protocol, authoritative knowledge, and organizational structures), guides conversations and discourses for collaboration. These support systems facilitate the effective sharing of feedback and collective decision-making. The major tenets of collaborative professionalism include collective autonomy, collective efficacy, collaborative inquiry, collective responsibility, and big picture thinking for all, which focus on the mechanisms of collaboration in teachers' accomplishment of professional outcomes (Hargreaves & O'Connor, 2017). Along with solidarity and solidity, these tenets enable teachers to collectively create knowledge and achieve shared goals through meaningful collaboration (Hargreaves & O'Connor, 2018a, 2018b).

Research has revealed several characteristics of Korean education reflective of collaborative professionalism (Authors, 2021a; Kang & Hong, 2008; National Center on Education and the Economy, 2021; Park & Byun, 2015). For instance, the rotation system of human resources that requires school-level educators to change schools every four to six years within their local province offers opportunities for teachers to build solidarity beyond individual

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schools (Park & Byun, 2015). District-level policies supporting financial and human resources for multiple forms of professional learning communities within and between schools further enable teachers to develop professional networks wherein collaborative inquiry collectively improves teaching practices (National Center on Education and the Economy, 2021; Yoo, & Jang, 2022). Although individual experiences may cause controversy over such school policies (Park & So, 2014), from the system perspective, the rotation policy and professional learning communities make possible functional and collective capacities for collaborative professionalism among teachers. Embedded in these designs as solidity is the country's socio-historical tendency to value the teaching profession. Teachers are seen as professionals who continue learning throughout their careers and, in this way, are both shaped by and shape norms and values in Korean society (Kang & Hong, 2008). This suggests Korean education systems have well-established infrastructures that can support both the solidarity and solidity of the teaching profession.

Study Context

Korean Education Context

Korea provides a unique context for studying how teachers developed collective resilience and collaborative professionalism in response to the pandemic. With its long history of government-driven schooling impacted by Confucian traditions, Korean society upholds teaching and learning as critical to holistic human development and social cultivation (Han & Makino, 2013). The Korean government maintains a highly developed bureaucratic system, wherein most education policies are governed at the national level, while teachers and schools have substantial discretion over classroom/school operation as professional bureaucrats (Author, 2020). For example, the Ministry of Education (MOE) requires teachers to participate in professional

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development activities for promotions and bonuses, while providing the necessary resources (e.g., budgets, instructors, technical support) for teachers to collaboratively operate professional development activities with other teachers and institutions. As Korean teachers stay in their careers as professionals for over 30 years on average, they have a well-established culture of collaborative professionalism and collective resilience that enabled them to quickly and effectively respond to the pandemic.

School Policies during the COVID-19 Outbreak

As shown in Figure 1, the 2020 Korean school year can be divided into three periods based on the spread of COVID-19 (Ministry of Education, 2020). When the first COVID-19 case was identified on January 20, 2020, the MOE made a series of unprecedented policy decisions (Authors, 2021b). After the mass infection in Daegu city in February, the MOE postponed the opening of all K-12 schools by one week, from March 2 to March 9¹, and subsequently ordered three more delays. The 2020 school year finally began on April 9 in the form of online classes and students attended in-person classes on May 20. During the delay, school districts and the MOE provided online learning materials for students to study at home. Teachers and school administrators then monitored students' learning progress online while working at school and district offices.

Although K-12 schools conducted online, in-person, and hybrid classes through the Spring semester (March to August) under the MOE's guidelines, the number of COVID-19 cases continued to increase. This second wave of COVID-19 in Korea mainly occurred in Seoul starting in August 2020. The Korean government mandated higher levels of social distancing that introduced several restrictions to daily life (e.g., prohibition of gatherings of more than a certain

¹ The school year in Korea ranges from the first week of March to February of the next year and includes summer, winter, and other breaks.

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number of people). As a result, K-12 schools in Seoul and the adjacent metropolitan areas moved hybrid classes to online in the middle of September.

In the middle of November 2020, the number of confirmed COVID-19 cases again increased across the country. To minimize students' learning loss, the Korean government raised the level of social distancing in accordance with the number of confirmed cases by region. K-12 schools in Korea responded by implementing in-person, hybrid, and online classes, respectively, based on grade level, school size (student population), and regional level of social distancing.

The aforementioned study context exemplifies how Korean teachers faced unprecedented challenges during the first year of the COVID-19 pandemic and how they used the resources available to develop new strategies for student learning in a limited time. Rather than resist urgent policy decisions, teachers actively and collectively engaged in collaborative learning to meet the demands of online teaching (Authors, 2021a). Altogether, K-12 schools in Korea succeeded in providing online and hybrid classes without large-scale, long-term school closures.

[Insert Figure 1 here]

Methods

To understand how teachers developed collective resilience during the COVID-19 pandemic, we analyzed qualitative interview data with Korean teachers. Data were collected from a broader study examining policy actors' (i.e., teachers, administrators, parents) perceptions of and experiences with Korean school policies during COVID-19 over the course of the 2020 school year (Author et al., 2021b). We, all of us former public school teachers in Korea, sought to communicate with Korean educators who experienced the pandemic at the frontline by listening to their perceptions of and experiences with pandemic related policies and anticipation of post-COVID-19 education. We recruited a group of educators (teachers and administrators)

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who are knowledgeable and interested in educational policies by contacting graduate school programs and teacher learning networks. The educators were asked about their observations of school-related policies, individual and collective efforts for student learning, and resources and strategies for overcoming challenges during COVID-19.

As our teacher participants shared the challenges they faced during the pandemic and a sense of pride in collectively overcoming these crises, we used a systemic focus to analyze teacher responses as a collective form of resilience. Our data consisted of seven individual interviews, four focus groups with nine teachers working at K-12 schools in Korea, and one teacher association representative who works closely with teachers across the country. Our use of focus groups specifically reflected the collective resilience shared by participants across various school contexts.

Participants

The participants of this study were all working in the K-12 public school system in Korea during the time of data collection and, as such, played an essential role in student learning during COVID-19. We selected information rich participants (Patton, 2015) attuned to education policy, who were willing to share their experiences, challenges, and accomplishments of schooling during COVID-19. We also maximized variations (Patton, 2015) in participants' backgrounds along dimensions of gender, school level, teaching experience, geographical location, and students' socioeconomic status. As shown in Table 1, there were three male and seven female teacher participants. Of these participants, five taught elementary, two taught middle school, two taught high school, and one was a teacher representative. Their years of teaching experience varied from six to 23 years. Two participants were working at schools supported by the Education Welfare Investment Program, a proxy for serving students of lower socioeconomic

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status. In terms of regional diversity, our participants were selected from a large metropolitan city (Daejeon), a mid-size city (Sejong), and a large provincial district (Jeonbuk), where urban, suburban, and rural contexts coexist.

[Insert Table 1 here]

Data Collection

We collected data via focus groups and individual interviews through Zoom. The first round of data collection was conducted directly after the first semester of COVID-19 in July 2020, which includes four focus groups consisting of nine teachers and an individual interview with a teacher association representative. We conducted three focus groups with elementary, middle, and high school teachers, respectively, to explore phenomena specific to the school level. We then facilitated a larger focus group of nine teachers to ascertain common perspectives across school levels. The focus groups helped us obtain richer, deeper data because participants themselves stimulated and facilitated sharing their experiences with one another (Bogdan & Biklen 1997). To better understand teachers' responses across schools, we then interviewed a teacher association representative who worked closely with teachers across the country and with the MOE.

The second round of data collection was conducted at the end of the 2020 school year in February 2021 to explore possible changes in teachers' responses and their experiences of the second semester with COVID-19. Individual interviews were conducted with each of the seven participants (six teachers and the teacher association representative). The first round of data collection focused on teachers' perceptions of and experiences with COVID-19 related school policies, the challenges of online schooling, the resources and strategies they used, and the lessons they learned from the first semester with COVID-19. We asked similar questions in the

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second round of data collection, as well as additional ones based on participants' personal reflections of their school year and how their perceptions had or had not changed. All interviews were video recorded and transcribed in Korean, and each ranged from 60 to 100 minutes.

Data Analysis

Our analysis focused on participants' perceived challenges, resources, and strategies in developing resilience through schooling under COVID-19. We adopted multiple cycles of coding (Saldaña, 2015) for data analysis. First, using open coding, we read our transcriptions and interview memos line-by-line in initial coding (Charmaz, 2014). We all coded interview transcripts individually using analytic memos and participant-centric terms to understand each participant's perspective. When we met as a group, we cross-checked our individual codes to explore common perspectives, categories, and patterns. We then collaboratively changed participant-centric terms to researcher-centric terms (Linneberg & Korsgaard, 2019) based on the research questions driving this study. From this stage of coding, we found that our data reflected more about system focused perspectives and shared responsibility of developing resilience across interviews. We thus linked our data to a systemic conception of teacher resilience that yielded possible codes for the next step (i.e., *challenges*, *personal resources*, *contextual resources*, and *strategies*). The second phase of analysis utilized focused coding (Charmaz, 2014) to identify categories aligned with the framework. We observed that, while the teachers in our study spoke on contextual resources for handling challenges, they rarely discussed personal resources. This led us to disregard the *personal resources* code. We then created subcodes that embraced common patterns in each of the three codes. As the resources and strategies participants shared were well aligned with the components of collaborative professionalism (e.g., collective autonomy, responsibility, and efficacy), these components became additional subcodes. Finally,

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we used theoretical coding (Charmaz, 2014) to determine the relationships between categories and emerging themes from previous analyses. We found that the revealed systemic changes across schools were accomplished by aspects of collective resilience that yielded *transformability*. In total, we conducted 12 group meetings for data analysis in which we reflected on individual memo analyses and collaboratively made decisions for next steps. In this paper, we added direct quotes in English only and the original quotes in Korean are available in Online APPENDIX.

Researcher Positionality

We recognize that our insider and outsider perspectives simultaneously shaped our perspectives and decisions in conducting this study. On one hand, all the authors had once worked as teachers in K-12 public schools in Korea, so we are aware of the professional teaching culture and education system in Korea. This insider perspective enabled us to understand the broader social and school contexts in which our participants were experiencing. On the other hand, as researchers in the U.S. academia at the time of data collection, we were informed by comparative perspectives as outsiders when interpreting and situating our data in the Korean context. For example, we identified the intrinsic Korean context regarding teaching professions, such as teaching as a long-term career and moral exemplars (insider). At the same time, in exploring the U.S. and other countries' responses to the pandemic, we identified the unique impact of the Korean school system on teachers' collective efforts (outsider). Together, these aspects shaped a more comprehensive view of Korean teachers' collective resilience during COVID-19.

Findings

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This section presents the challenges teachers encountered during the pandemic, the resources available to them, and the strategies they used to address. As our data analysis revealed several aspects of developing collective resilience (i.e., teachers as a professional community), we specifically focused on teachers' collective efforts for overcoming challenges and leading changes. Based on our analysis, we identified the *transformability* of Korean teachers as a critical element of resilience in their work during the pandemic. Figure 2 shows the complex interrelations among these factors (i.e., challenges, resources, and strategies).

[Insert Figure 2 here]

Challenges by the External Crisis of COVID-19

In line with resilience research suggesting people navigate challenges before searching for resources (Mansfield, 2020), the Korean teachers in our study identified four major challenges of COVID-19: (1) misaligned understandings of rapidly changing policies, (2) online teaching imposed with limited knowledge and skills, (3) exacerbated learning gaps and student wellbeing, and (4) excessive social pressure to be “flawless.”

Misaligned Understandings of Rapidly Changing Policies

At the beginning of the 2020 school year, the MOE's decisions regarding school openings and instructional delivery formats (in-person, hybrid, or fully online) fluctuated in accordance with the spread of the Coronavirus and public opinion. In addition, the MOE delivered “big policy messages,” such as delays to the start date of the school year, via media to the public first without notifying schools and teachers in advance. The MOE's fluctuating and urgent decisions coupled with a lack of communication with local districts and schools interrupted teachers' daily work and caused significant confusion. Of this phenomenon, one focus group participant, Teacher Ji, remarked:

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Whenever the MOE announced a new policy, they said [so] as if all teachers were well prepared [to initiate school reopening and online learning], but in fact, we were not.... Accordingly, my school reorganized its academic schedules and curricula, but the next day, our district provided another guideline requiring new changes again... This happened repeatedly and we got so tired of it.

This misalignment between top-down policy mandates and the schools required to implement them was a barrier for teachers, as they had to “provide appropriate answers to parents’ questions and complaints.”

Furthermore, without clear guidelines, teachers had difficulties navigating the new policies’ additional responsibilities, particularly regarding “which school departments would lead newly created safety guidelines.” These sudden and frequent policy changes greatly burdened participants, as they required teachers to maintain consistency in curricula and assessment simultaneously across in-person and online classes, despite the many differences between these two methods of teaching.

Online Teaching Imposed with Limited Knowledge and Skills

All teachers in the current study were required to initiate online teaching with only a month of preparation. As a result, they expressed feelings of fear and anxiety, asking themselves things like, “How do I carry all my classes online? Do I know how to do it?” Participants indicated worry as to whether they could do their job without the requisite knowledge, experiences, and skills for effective online teaching when the MOE announced a move to online schooling in March 2020. In an individual interview, Teacher Kyung described the process of her urgent learning to teach online as “heading to the empty ground”:

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What percentage of Korean teachers were very familiar with and ready for immediate online teaching in the early stage of the pandemic? Teachers in my circle at least tried to learn like “heading to the empty ground” and I had to study how to use Zoom by watching YouTube. To make students not anxious about [online classes], I had to keep checking on technology because when disconnection happens, the quality of lessons becomes lower.

Although teachers were “skillfully” implementing online teaching by the end of the school year in response to the COVID-19 crisis, our participants spent the beginning and middle of the school year “desperately learning about and equipping [ourselves with] online teaching skills” and searching for ways to establish rapport with the students they were meeting for the first time online.

Exacerbated Learning Gaps and Student Wellbeing

Teachers also encountered “frustration” with online education given the significant gaps in learning and wellbeing they observed in students from families of lower socioeconomic status. Effective online schooling required more input from families or other adults to support student learning, which ultimately led to “learning deficits” for students whose families could not allocate such resources for their children. Focus group participant, Teacher Jae, explained:

COVID-19 has highlighted the children in the blind spot of welfare in our society... In online schooling, students who had been a little behind now fell more behind. For those whose parents could not provide enough caring at home, the learning gap stood out.

Notably, the health guidelines and online classes greatly restricted Korean teachers’ ability to offer students the additional instruction and guidance necessary to narrow learning gaps as they had done in in-person settings. Additionally, our participants serving students from economically

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marginalized families expressed enduring concern for health issues caused by a lack of access to regular lunches and masks. Witnessing the widening gaps in student learning and wellbeing without being able to actively intervene caused the teachers in our study to feel seriously frustrated.

Excessive Social Pressure to be “Flawless”

Throughout the pandemic, Korean teachers operated under considerable social pressure from the public to be “moral exemplars.” As being a schoolteacher in Korea accords one a relatively high social status (Park & Byun, 2015), teachers often received “social animosity” if they did not meet the public’s high expectations. Participants consistently expressed “bitterness at being seen as civil servants and as caregivers” who were expected to take high levels of responsibility that the public often took for granted. Teachers were blamed for mostly inevitable occurrences, like COVID-19 infections. In an individual interview, Teacher Association Representative Tae shared his thoughts on the public’s responses to teacher infection cases:

Teachers would have no social interactions after work. They couldn’t....I saw one teacher’s family getting harsh criticism from their local community. Because the teacher turned out to be COVID-19 positive due to their interaction with a family member who attended the protest. And media reported it with anonymity, but it brought harsh criticism from the public. Many teachers [were] under pressure [to avoid the infection] throughout the entire year.

Other participants echoed Representative Tae’s sentiment, expressing bitterness at the excessively imposed moral standard for teachers to be “flawless,” particularly at the expense of recognizing and celebrating their devotion to students and the daily risks they took to deliver quality learning under unprecedented circumstances. Teacher Kyung shared that “I have not

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received any recognition [for my commitments to support my students] from others, except my family.” Such social pressures for “teachers as civil servants to sacrifice themselves for students and others” without due recognition caused teachers to feel bitterness. Nonetheless, they continued to cultivate high levels of excellence in their vocation by locating appropriate resources and strategies to deliver high-quality teaching and student safety during the pandemic.

Contextual Resources Utilized

The participants of this study faced multiple, overlapping challenges that required them to utilize both existing and newly invented resources to support student learning and wellbeing and to grow as professionals. We specifically found participants often collectively relied on contextual resources rather than personal ones to “get through” the unprecedented crisis.

Collective Autonomy and Flexibility: Promoting School-Based Decision-Making

Despite its limitations, COVID-19 has opened the door for autonomy and flexibility in school-level decision-making. The new policies for online classes, curriculum implementation, and disease prevention have prompted the MOE and municipal districts to implement new guidelines for schools depending on their contexts. For instance, Teacher Yeon noted, “Previously, we were supposed to follow what MOE or local districts told us. But since the pandemic, we have had to create and build new ideas and things with the autonomy granted for schools, especially decisions for teaching methods and student evaluation.” This school-level autonomy resulting from broadly structured district guidelines around COVID-19 led teachers and principals to “feel empowered” and “enjoy democratic decision-making” in their schools. Our participants’ responses suggest collective autonomy allowed teachers to work independently of the usual top-down structure of schooling while remaining open to feedback and collaborative decision-making beyond individual autonomy (Hargreaves & O’Conor, 2017).

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When districts eliminated the requirement for educators to complete administrative tasks (e.g., paperwork for policy mandates) in response to COVID-19, teachers were able to invest more time and energy into making collective decisions on things like budget distribution, professional development, curriculum redesign, and student evaluation. In this way, online and hybrid classes driven by the pandemic ironically allowed teachers to work more closely with colleagues because they were spending less time on student discipline and classroom management. In an individual interview, Teacher Association Representative Tae commented, “Teachers who experienced school-level autonomy and self-governing through democratic decision making now realized they could actually do that. They experienced school districts actually supporting schools, not just giving orders to schools.” This increase in school-level autonomy and online classes in response to COVID-19 thus unintentionally brought time, space, and discretion for teachers to navigate newly enforced structures of school-based decision-making and instruction.

While school closure policies were top-down in the beginning of the 2020 school year, teachers and schools used the collective autonomy and flexibility later granted by the MOE and school districts to develop and strengthen their organizational capacities for creating policies and guidelines based on local needs. This led teachers to function independently of upper-level bureaucratic authorities and rely more on knowledge and rules co-constructed through collaborative discussion and decision-making. Collective autonomy and flexibility thereby became an important resource for collective teacher resilience that made it possible to overcome difficulties caused by the misaligned policy messages (Hargreaves & O’Connor; 2017).

Solidity and Solidarity: Facilitating Collaborative Professionalism

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The collaborative professionalism in Korean school systems made possible by increased school-level autonomy and flexibility has been a critical resource for teachers in addressing the challenges of schooling during COVID-19. Since the extensive teacher professionalization reform in Korea in the 1990s, teacher development and continuous learning have had systematic support (National Center on Education and the Economy, 2021) in the form of professional cultures, norms, and solidity for collaborative learning among teachers.

When most teachers struggled to prepare for online teaching within the limited time they were given, Professional Learning Communities (PLCs) established at the school, district, and national levels in Korea (Authors, 2021b; National Center on Education and the Economy, 2021) helped teachers promptly learn new skills and adapt old skills in both formal and informal ways. For instance, participants from Daejeon shared that their district supported the existing PLCs in implementing blended learning by creating video lessons and materials to share among teachers in the region. Beyond formal district initiatives, all participants in this study relied on teacher-led grassroots learning communities or school-based PLCs to share knowledge about successful practices for online teaching and blended learning.

Along with the *solidity* available through existing policies and systems, participants also highlighted how *solidarity* developed and strengthened in various forms of PLCs in response to the urgency of moving teaching online. The teachers in this study indicated that formally and informally established PLCs at school- district-, regional-, and national-levels became communities wherein teachers were able to share their experiences, challenges, and dilemmas. These PLCs also enabled teachers to empathize with each other and gain new knowledge and skills for teaching online. The participants discussed how the PLCs they were part of revitalized and strengthened solidarity among teachers, which in turn facilitated teacher collaboration in

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schools and beyond, as well as shared understanding of “being a teacher during the pandemic.” In addition, PLCs made it possible for teachers to continuously develop collective efficacy and reinforce collaborative professionalism. Teacher Young, for instance, expressed her impression of shared learning and openness throughout the pandemic: “Teachers would make it together whatever challenges come. I think Korean teachers need to be proud of themselves!” Overall, the collegial solidarity among teachers (Hargreaves & O’Connor, 2017) promoted through the process of collectively solving problems became a foundation for collective teacher resilience.

Collective Responsibility Embedded in Infrastructure: Enhancing Access to Learning

Our interviews with study participants also revealed that the well-established education infrastructure in Korea—including learning platforms and childcare programs—was a significant resource for student learning and teacher resilience. When the spread of COVID-19 hit the country, Korean education policies and school systems were already fundamentally grounded in the idea of equal access to learning opportunities (Authors, 2021a). Since the 1980s, the public Educational Broadcasting System (EBS) has provided various free radio, television, and Internet programs to supplement a wide range of K-12 school curricula (Kim et al., 2012). The teachers in our study all commented that the existing programs and platforms produced by EBS were useful for virtual lessons during the pandemic. Elementary school teachers particularly pointed out that the MOE’s decision to adopt EBS TV stations instead of the Internet for first- and second-grade classes was effective because young children have difficulties using the Internet for long periods of time. In a focus group, Elementary School Teacher Joo stated:

As a second-grade teacher, I found early graders were struggling with online learning.

Based on their development stage, we could not use computer-driven lessons. But, under

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this government, schools use EBS lessons. It [had] already created high-quality lessons and content aligned with the national curriculum. I think they were so helpful for kids.

In addition to EBS, teachers identified several e-learning platforms offered through regional districts that helped them successfully run asynchronous lessons and track students' progress without many difficulties. Beyond the benefits of these lessons and e-platforms, the Korean government has been offering free childcare programs after regular classes in most elementary schools since 2004 to support the learning and wellbeing of children with working parents (Lee & Cho, 2021). This childcare policy enabled schools to continue offering urgent childcare for families in need when online classes were the only option during the spread of COVID-19. Our participants all expressed appreciation for the significance of such learning and welfare programs, especially during the pandemic. These infrastructures further helped teachers recognize education as a public good, such that they began prioritizing "our students" and "education for society" instead of "my students" and "my school." In sum, participants in this study agreed collective responsibility and a mutual commitment (Hargreaves & O'Connor; 2017) were crucial resources for serving all students.

Strategies Developed for Transforming Teaching and Schooling

Based on the contextual resources above, we identified three main strategies teachers developed to overcome the challenges of schooling during COVID-19: (1) galvanizing collaborative inquiry, (2) utilizing timely communication, and (3) envisioning the future of schooling.

Galvanizing Collaborative Inquiry for Teaching Online

Using existing PLCs and newly formed professional networks at multiple levels, teachers in Korea committed to developing new strategies to reduce the information gap between teachers

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and to increase the quality of online teaching in response to COVID-19. In an individual interview, Teacher Kyung stated:

Sharing knowledge to improve teaching quality, the most fundamental task of teachers, has been done in a more voluntary way than before the pandemic because teachers recognized that gaps in instructional knowledge and skills across teachers would result in learning gaps among students. We [teachers] proactively shared new ideas and information with others to reach a teaching quality level aimed at reducing instruction quality gaps across teachers.

As Teacher Kyung's testimony indicates, we found that this collective responsibility (i.e., guaranteeing teaching quality during the pandemic crisis) was linked to solidarity and illustrated by participants as "teachers rowing in the same boat for our students" and "togetherness."

Given the demand for changes in classroom teaching during COVID-19, various types of PLCs enabled teachers to create, circulate, and adopt new teaching strategies. For example, regarding her experience of how existing PLCs helped her learn new skills for online teaching, Teacher Ji shared in an individual interview:

Actually, I have been in *gyosa dongari* (a type of teacher learning community) where we focused on 'flipped learning' [prior to the pandemic]. During COVID-19, teachers had to run virtual classes and the situation forced us to adopt flipped learning in our classroom... I recorded my lessons and shared them with teachers in my school [who were not part of the learning community]. Previously, most teachers were like, 'yeah, they are good but what I am doing is also good' or 'comfortable.' But now they must [adopt new skills learned from colleagues to change their teaching]. While preparing online content and Zoom classes, teachers felt this was better than they thought. Some

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said that they want to continue this even after COVID-19 ends. It was an unexpected opportunity [for teachers] to expand our perspectives in terms of teaching.

In addition, the newly created PLCs for online teaching allowed teachers to learn the latest technology and online learning platforms, such as Google Classroom and Zoom, by recording teaching videos. These collaborative school-based networks became safe spaces in which teachers could discuss, develop, and practice new strategies for enduring uncertainty.

In sum, teachers in Korea utilized various professional learning networks at the school, district, and national levels. Our analysis suggests this immediate and extensive collaboration was likely possible because the teaching profession in Korea had garnered a solid foundation of trust in cultivating collaborative professionalism over a sustained period of time. This collective, professional commitment and trust in teaching as a profession thereby shaped collective resilience in the form of *transformability*, which ultimately helped reduce the adverse side effects of new and unprecedented demands on teaching (Amir & Kant, 2018; Beltman, 2015).

Utilizing Timely Communication in response to the Crisis

Our participants also described how frequent and timely communication in school systems enabled them to cope with the pandemic, understand unprecedented policies and programs, and maintain quality teaching and schooling in the long run. In the uncertainty and lack of information caused by COVID-19, teachers and school administrators had to collect available information through active, real-time communications, thereby creating new knowledge for making informed decisions. Schools and teachers specifically relied on (in)formal networks in both vertical (e.g., between districts and teachers) and horizontal (e.g., between schools) settings.

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Through their mobile devices, teachers actively communicated with their subject groups, grade teams, and administrative teams across schools and regions to collect information for timely decision-making at the school level regarding academic calendars and COVID-19 prevention guidelines. Of this, teacher Mi said in a focus group that:

Networks using Kakaotalk chats [a Smartphone messaging app widely used in Korea] were often used for decisions that individual schools cannot make easily. [We had networks each] for high schools, middle schools, and elementary schools. And we also have [networks for] department head teachers, vice principals, and principals. Through these networks, we would continuously discuss and make decisions [that were not explicit in the given policies]. Broadly speaking, these networks impacted a lot on our shared decision-making.

Teacher Mi's testimony here evidences the existence of collaborative professionalism noted in the previous section. This professionalism was embedded in the Korean teacher communities and appeared to make it possible for teachers to communicate with each other in and out of their schools without hesitation or barriers. Teacher associations also used "this rapid, responsive communication system aimed at revealing the current needs of school practices and offering prompt suggestions for the MOE and making immediate changes."

Moreover, combined with enhanced collective autonomy and flexibility, teachers could proactively participate in school decision-making to best serve local needs when dealing with confusion caused by the challenge of misaligned policy messages. At the same time, because timely communication requires frequent interactions in virtual spaces without clear boundaries on work hours, we argue it is necessary for policymakers and school leaders to further discuss

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how to build work-life balance for teachers in online settings while achieving the advantages of real-time communication in the new normal of COVID-19 (Authors, 2021a).

Envisioning the Future of Schooling: Centering Students & Re-shaping Professional Identity

Our interviews with the teacher participants notably uncovered that teachers often referred to the current school system under COVID-19 to envision new possibilities for the teaching profession and schooling as a whole. Although Korean teachers were forced to manage the pandemic at the frontlines, our analysis showed they were constantly (1) considering new visions for the purpose of schooling by centering students and (2) reconstructing their professional identities beyond technically responding to the urgency of pandemic related problems.

Revisiting and Reimagining Education by Centering Students. Throughout the pandemic, participants realized the importance of school education in serving communities and society. Teachers particularly put students at the center of future schooling. For instance, in an individual interview, Teacher Association Representative Tae said:

Many Korean people still possess mindsets centered around competition since the Korean War. This happened because of Korean historical trauma, which forced school education to be a tool for survival with limited resources. . . . However, COVID-19 [forced] us to think differently and move on from it. . . . Schools need to prioritize students at the middle or bottom [students in need or from marginalized groups] among all students. We must restore and promote the integrity and value of those students in the margins. Schools need to create a space for them to thrive and feel the joy of learning. . . Teachers need to make continuous efforts to support the growth and learning of each individual student.

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Representative Tae's response above illustrates an equity mindset toward schooling centered on uplifting marginalized students. It articulates how Korean education has been shaped by the "survival" mindset from the "historical trauma" of colonization, war, and occupation. He also recognized COVID-19 as a catalyst for teachers to rebuild "new grammars of schooling" that are attuned and responsive to each student's needs. This echoes Teacher Young's comment, "The pandemic helped teachers [move] away from the path [of] dependency on what schools have been doing. Now is the time for teachers to rethink and create new goals for schooling." These responses illustrate how the pandemic provided an opportunity for participants to critically reflect on the previous education system and reimagine different ways of operating schools.

Teacher Mi spoke similarly about schools' new role of centering and empowering students, saying that schools have to help students learn "something that is meaningful to their lives" not just trying to equip them with "what we [schools and teachers] think important for them." She added that the mindset of "discovering student potential" came to her more clearly when she took on a teacher leader position during the pandemic. These responses suggest that the changes teachers had to make in response to COVID-19 prompted them to re-assess the current school system from a more student-centered perspective to effectively navigate new directions and goals for schooling during and post COVID-19.

Reshaping Professional Identity with a Sense of Urgency. Observing the "forced" and "irresistible changes" in schools during COVID-19, our participants found themselves exhibiting a sense of urgency in staying attuned and being receptive to changes and their impacts on student learning. As teaching is a lifelong career for most Korean teachers (Author, 2021c), participants managed multiple challenges during COVID-19 and reflected on their collective accomplishments in continuing schooling.

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Teachers also envisioned how to better prepare for the next chapters of their careers. For instance, in an individual interview, Teacher Kyung shared her notion of “accountability to the profession as professionals,” noting:

You know, teachers like me, or even younger teachers, would treat the idea of ‘future education’ like AI or a fourth industrial innovation [as] coming soon but not now. I knew [these things] would be part of our lives at some point. However, all those innovations just happened without any preparation. While running online classes, I thought about my next 20 years in this career....Personally, I thought this is a time schools cannot be unresponsive to any unexpected, urgent changes. There could be any other crisis situation, not just like a virus-related one.... So I really have to push myself with tension and continue to participate in professional development and develop myself as a professional... I think we as teachers need to be held accountable to the profession as well as [to] society by developing our competencies.

Here, Teacher Kyung views her experiences with the challenges of COVID-19 as forced opportunities to better equip knowledge and skills to embrace societal “innovations.” She further placed “developing myself [herself] as a professional” at the center of teacher accountability so she is as prepared as possible for any future crises in her long-term teaching career. Echoing the importance of teacher competencies in response to a fast-changing society and uncertainty, Teacher Ji posited that “teachers need to extend our commitments to offer meaningful opportunities for student learning, even in an unexpected environment like this.”

Together, these reflections suggest COVID-19 necessitated immediate responses from teachers that required them to act as frontline professionals who create new ideas of schooling and actualize unprecedented policies in online and in-person learning spaces. In constantly

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dealing with the urgency of ever shifting needs, Korean teachers were persistent in envisioning and imagining the “big picture” (Hargreaves & O’Connor, 2017, p. 88) of their responsibilities as teaching professionals who would lead school education in the long run. We similarly found collaborative professionalism was key to transforming teaching practice, re-defining teachers’ professional identities, and envisioning the future of education as a community of expertise, all of which go beyond individualized ways of meaning-making.

Discussion: Teachers’ Collective Resilience in Times of Crisis

Aligning with the system-focused perspective of teacher resilience (Mansfield et al., 2016), the findings of this study suggest that Korean teachers collectively navigated challenges, resources, and strategies to effectively address the COVID-19 crisis. We found that the Korean teachers in our study responded to the urgency of the crisis by mobilizing collaborative professionalism to make changes in teaching practice and redefine their responsibilities, which leads to the *transformability* of teachers. Our participants are faced with complex challenges and struggles due to rapidly changing policies, limited knowledge and skills for online teaching, exacerbated learning gaps, and excessive social pressure to be “flawless” during the pandemic. To cope with these challenges, the teachers immediately identified contextual resources available in the education system, including collective autonomy and flexibility, solidity and solidarity, and collective responsibility embedded in infrastructure. They mobilized these resources to develop strategies for revitalizing collaborative inquiry, using timely communication, and envisioning the future of schooling to transform teaching practices and the role of the teaching profession in Korean society. This section discusses several important points from the findings.

First, among the challenges participants faced during the pandemic, we found Korean teachers particularly struggled with the public’s high expectations for those in the teaching

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profession. In addition to the pressure of preparing for online teaching in a short period of time and effectively supporting student learning, the teachers were severely criticized compared to those in other professions. In particular, participants expressed *bitterness* toward public and local criticism when educators contracted the virus and students' social interactions were minimized as a result (Bae, 2020). Although teachers made substantial efforts to ensure student safety and implement online and hybrid classes, these efforts and dedication were rarely acknowledged by the public. Teachers instead considered themselves taken for granted as “professional” civil servants. This result can be explained by Korean culture's characteristically high expectations for the teaching profession, as evidenced by its socio-historical background and the policy discourse of “high-quality teachers” in Korea (Authors, 2021a, 2021b; Park & Byun, 2015). For these reasons, Korean teachers are expected to become “the most intelligent and best moral exemplars” in addition to high-quality instructors (R. Kim et al., 2011, p. 52), especially in the face of crisis situations like COVID-19. It is also likely that the disproportionate public pressure on teachers might be partially attributed to the government's use of contact tracing methods that prioritized transparency over privacy to minimize the spread of COVID-19 (P. Kim, 2021). Teachers responded to this pressure by taking on even more responsibility, even as their feelings of “bitterness” and fatigue lowered morale.

Second, our study showed that, instead of relying solely on personal resources, Korean teachers actively utilized a combination of contextual resources and collaborative professionalism, which ultimately led to collective resilience. Collaborative professionalism was found to be a widespread phenomenon among Korean teachers through the sharing of existing resources (e.g., PLCs, online PDs, and infrastructures like EBS). This form of professionalism enabled them to develop strategies to address the challenges of COVID-19 and improve online

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teaching. These pre-existing resources became the foundation for developing a shared sense of urgency and collective responsibility. To some extent, COVID-19 enabled teachers to revise, improve, and expand these resources to catalyze effective collaboration among teacher communities,. With the country's long term investment in teacher learning communities (Authors, 2021a, 2021b; Kang & Hong, 2008; National Center on Education and the Economy, 2021), COVID-19 as an "irresistible force" (Stone-Johnson, 2021) reinforced solidarity among teachers and made the development of collective responsibility, efficacy, collaborative inquiry, and joint work possible for navigating online teaching strategies. Our participants all recognized that sharing information and creating collective knowledge through professional learning communities ultimately reduced "instructional quality gaps" between teachers. Given this, we contend collaborative professionalism was likely possible due to the high trust and high precision culturally rooted in Korean teaching and the pre-existing resources (Hargreaves & O'Connor, 2018b). Furthermore, teachers' use of these resources promoted big-picture thinking, or the reimagining of schooling and professional identity by centering students—a critical aspect of collaborative professionalism (Hargreaves & O'Connor, 2017). This aligns with scholarship indicating teacher resilience takes place collectively at the community level in vulnerable situations due to common reasons and shared purposes (e.g., Ebersöhn, 2012; Oktari et al., 2018).

Finally, Korean teachers perceived this unprecedented change as an opportunity to ponder the direction of future education and professional identity beyond simply acquiring the skills necessary to "survive" the daily difficulties of COVID-19. Ironically, the pandemic opened the door for Korean teachers to reevaluate traditional Korean education systems and to envision and reimagine their responsibilities as professionals in a community. Our participants reported

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that the crisis prompted them to reflect on school-driven competitive education; advocate for student-centered learning that fosters individuals' strengths and potential; and redefine teacher identity for future education as professionals, instructors, and caregivers. This suggests that teachers' collective resilience in response to the pandemic crisis may impact the overall growth and change of the teaching profession in Korea through further reflection on and revision of the fundamental roles of schooling and teaching. Such resilience is thus not for the purpose of returning to pre-pandemic ways—rather, it is for pursuing sustainable growth and continuous transformation (Reich et al., 2010).

Conclusion

Our study has important implications for policy and practice, especially in terms of building a collaborative professional culture in teaching, as our work here demonstrates this culture is a key basis for the development of teacher resilience in times of crisis. It is particularly noteworthy that the contextual resources Korean teachers heavily relied on to develop collective resilience during the pandemic were already established in the Korean school system by cultural and policy predilections for long-term educational practice and investment in teacher growth. Given the high social status that comes with being a teacher, Korean teachers tend to remain in their jobs until retirement (Korean Educational Development Institute, 2019) and work at multiple schools in a single province throughout their careers. This context enables teachers in Korea to foster strong social networks and collaborative learning communities within and across schools. As such, this context and teachers' collaborative professional culture, as shaped by long-term policies and systems, enabled Korean teachers to achieve collective resilience in responding to the COVID-19 crisis.

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Policymakers must thus prioritize creating and investing in policies and resources fundamental to teachers' collaborative professionalism and account for the long-term impacts of overcoming pandemic related challenges and developing teacher resilience. Accordingly, teachers have to be agents who can collectively lead the directions and process of resource mobilization, collaborative and shared learning, and strategy development across schools, districts, and regions. For instance, as our findings show, teacher networks and professional development can be further extended beyond individual schools and regional barriers with technology adoption during the pandemic. Moving forward, teachers' taking collective agency of developing and utilizing such a space to create, share, and circulate knowledge is critical to strengthening collective resilience as professionals.

This study has limitations for future research to address. First, as we focused only on the first year of schooling under COVID-19, future studies should longitudinally investigate how teacher resilience has been changed or developed during and after the COVID-19 era of education. Second, this study mainly focused on teachers' perspectives and did not explore these perspectives in relation to organizational factors, such as leadership influence and school culture. Future research exploring the links between organizational support and teacher resilience can therefore offer implications for districts and policymakers regarding how school leaders can better support the development of teacher resilience. Third, as our study focused on common phenomena shared across teacher participants in Korean schools, future work should be done via case studies to analyze how multiple contexts inform teacher resilience, especially in crisis situations.

Overall, this study expands existing scholarship on teacher resilience by exploring *collective resilience* shared among teachers in Korea, where teaching is a highly regarded long-

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term career. Our analysis revealed how the pandemic revitalized these teachers' embedded collaborative professionalism and how this professionalism resulted in teachers' ability to transform their teaching and conceptions of schooling. In doing so, we *scale-up* teacher resilience toward more collective and communal, from the individual level, by linking resilience to collaborative and systemic changes in schooling during times of crisis.

Journal Pre-proof

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Tables and Figures

Table 1

Background of Participants

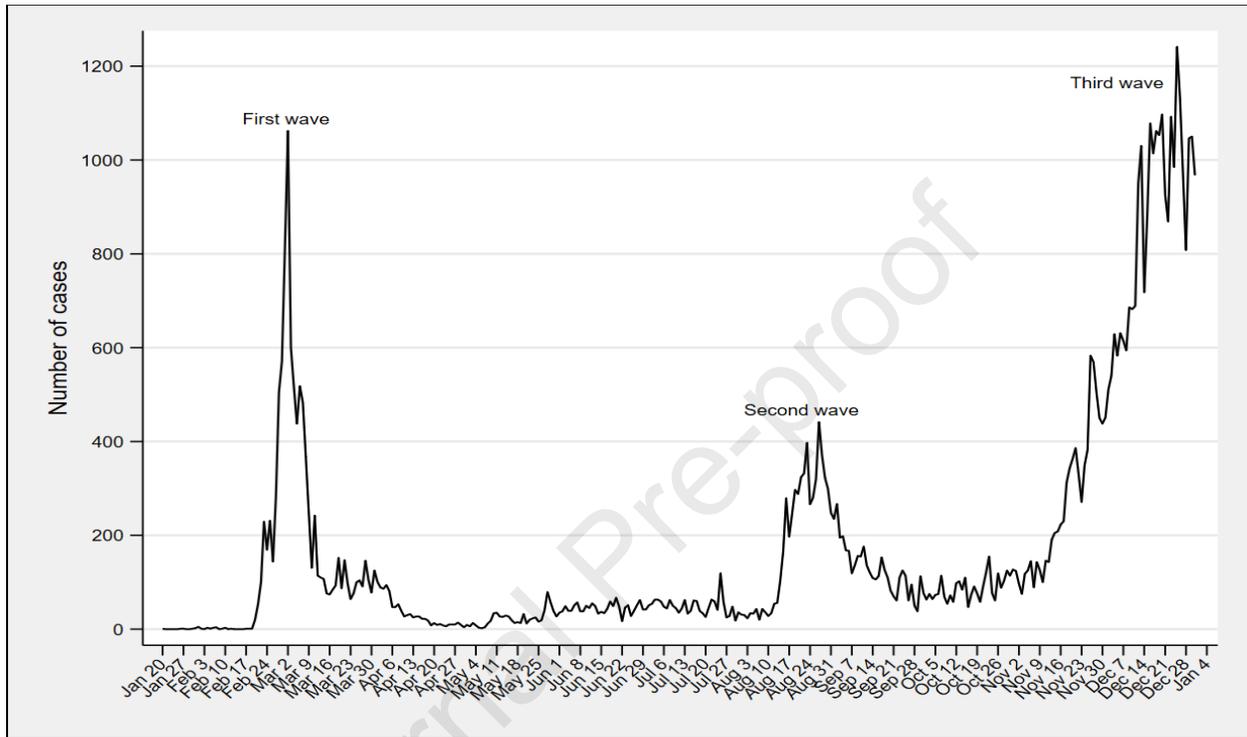
Position & Middle Name	Gender	School level	Years of Teaching	Priority Education Welfare Investment	Region of	Region (Municipal level)	Focus group interview	Individual interview
Teacher Jae	Female	Elem.	7	N		Daejeon	Y	N
Teacher Jung	Male	Elem.	6	Y		Daejeon	Y	Y
Teacher Hye	Female	Elem.	13	N		Daejeon	Y	Y
Teacher (DH) Hyun	Female	Elem.	14	N		Jeonbuk	Y	N
Teacher (DH) Young	Male	Elem.	Not available	N		Daejeon	Y	Y
Teacher (DH) Yeon	Female	Middle	19	N		Daejeon	Y	N
Teacher Ji	Female	Middle	7	N		Sejong	Y	Y
Teacher Mi (DH)	Female	High	10	Y		Sejong	Y	Y
Teacher Kyung	Female	High	15	N		Daejeon	Y	Y
Teacher Association Representative Tae	Male	-	2 (23 years of teaching)	-	-	-	N	Y

Note. This table is revised from the participant information of the larger research project (Authors, 2021b). Elementary, middle, and high school in Korea correspond to U.S. grades 1-6, 7-9, and 10-12, respectively. There are 17 municipal-level districts in Korea. DH: department head teacher.

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Figure 1

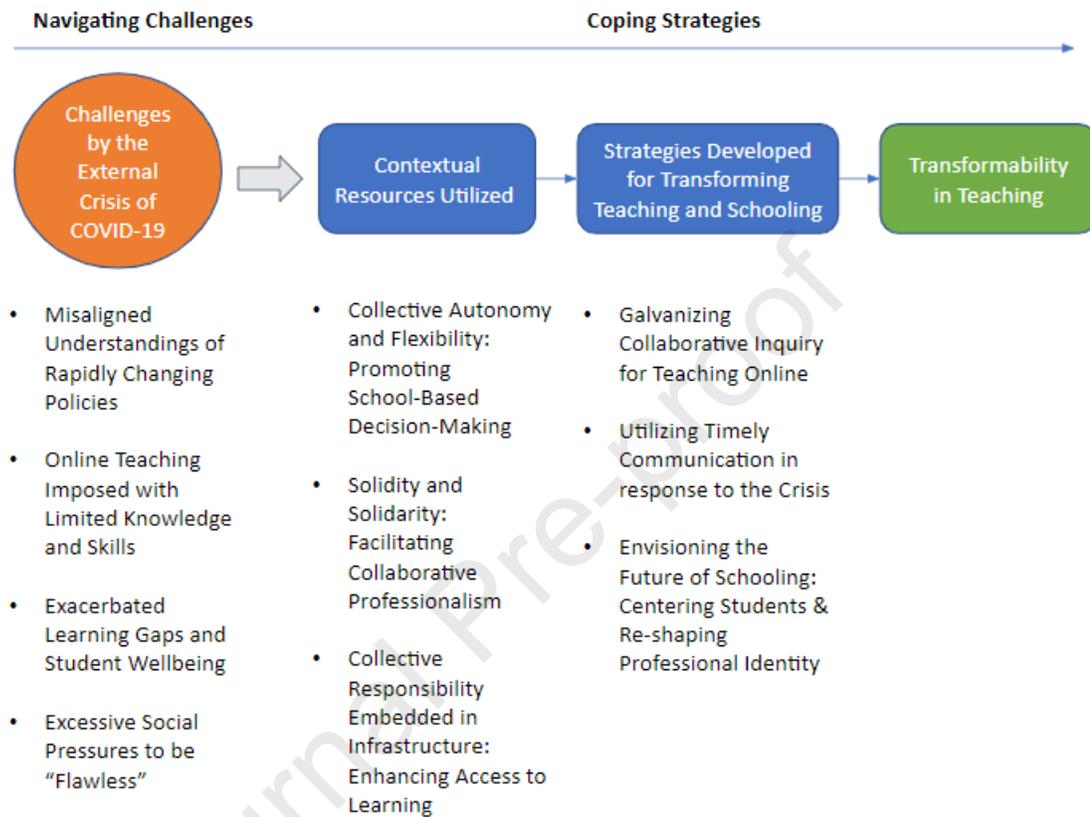
Trend in COVID-19 cases in Korea in 2020. Data Source: Korean Centers for Disease Control and Prevention (<http://ncov.mohw.go.kr/>)



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Figure 2²

Resilience as transformability of Korean teachers in COVID-19



Note: The model adopted from Mansfield (2020, p.21) and revised based on our analyses.

² It should not be necessarily printed in color.