

Adapting Teaching Quality: Insights from Bronfenbrenner's Contextual Framework during the COVID-19 Pandemic

The COVID-19 pandemic necessitated a critical examination of teaching quality and educational disruptions. Utilizing Bronfenbrenner's bio-ecological systems theory and the Process-Person-Context-Time (PPCT) model this article explores the pandemic's impact on teaching quality as a practice - understood as contextual and collective action. Drawing on semi-structured interviews with police educators at the Norwegian Police University College the analysis illustrates how police educators responded to the educational landscape during the pandemic. Findings show that the pandemic has altered the microsystem of direct interactions, necessitating adaptations in teaching methods and the reinforcement of relationships via digital mediums. The mesosystem's interlinkages faced recalibration as educators bridged the gap between home and institutional learning environments. At the exosystem level, institutional policy changes and community responses emerged as critical influencers of pedagogical approaches. The macrosystem, encompassing the societal response to the pandemic, also significantly shaped educational norms, and expectations. This article reveals that the pandemic has spurred a rethinking of teaching quality as a practice, highlighting the importance of adaptability, innovation, and resilience and suggesting integration of these attributes into future educational strategies. The aim of the study is to better understand the influence of environmental systems at varying proximity on teaching quality as a practice.

Keywords: Teaching quality, COVID-19, Bronfenbrenner, PPCT, Police education.

Introduction

The COVID-19 pandemic has brought about unprecedented challenges to all sectors of society (Dagiene et al., 2022), including police training and education (Halford & Youansamouth, 2024). Schools and universities have had to rapidly adapt to changing circumstances, often shifting to online or hybrid teaching modes (Carrillo & Flores, 2020). This has led to a profound re-evaluation of what constitutes quality in teaching and learning (Bern et al., 2021). The rapid shift to online education particularly impacted sectors such as police training, which traditionally relied heavily on face-to-face, interactive models of teaching (Davies & Al Sharefeen, 2022). This article focuses on the exploration of teaching quality as a practice during the COVID-19 period, with an emphasis on Urie Bronfenbrenner's context concept (Bronfenbrenner & Morris, 2007).

Bronfenbrenner's bio-ecological systems theory, with its process-person-context-time (PPCT) model, provides a holistic framework for understanding and analyzing human development (Bronfenbrenner, 1986; Bronfenbrenner & Morris, 2007). In the realm of education, it allows us to examine the diverse factors influencing teaching quality. This is particularly meaningful when, as we do in this

1 article, treat teaching quality as a practice implying that it is both contextual and
2 collective in its nature (Tight, 2015; Wittek & Habib, 2012). Highlighting the
3 efficacy of a holistic approach, Davies & Al Sharefeen (2022) emphasize its
4 potential to minimize the negative impacts on teaching practices and improve the
5 faculty and student experience in transitioning to online learning. This underscores
6 the notion that teaching quality emerges from the nuanced dynamics of teaching
7 practices themselves, enriched through collaborative engagements that shape and
8 are shaped by these practices.

9 This article is the third of a four-part series, each article with a separate
10 academic contribution focusing on a different aspect of Bronfenbrenner's PPCT
11 model (Sookermany et al., 2023a, 2023b). The first two articles have addressed the
12 process and person elements of the PPCT model, whilst this article focus on the
13 'context' perspective, which refers to the different environmental systems that a
14 person interacts with, from the immediate surroundings to the broader societal
15 context.

16 In Bronfenbrenner's model, context is envisaged as a bio-ecological system of
17 systems surrounding the individual, consisting of four different layers: the
18 microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1986;
19 Bronfenbrenner & Morris, 2007). These layers are structured from the innermost
20 to the outermost based on the principle of proximity. The closer the system, the
21 stronger its influence on the individual's sense-making and behavior.

22 In the context of the COVID-19 pandemic, these layers have been
23 significantly disrupted and reshaped. Understanding how these changes have
24 impacted teaching quality requires giving the surroundings a meaningful place in
25 our narrative. This involves examining the environments the individual teacher is
26 associated with, and how these environments have influenced what is recognized
27 as good teaching practice in their specific community (Wittek & Habib, 2012).

28 Our investigation is based on semi-structured interviews with police educators
29 and their nearest leaders at the department of Post Graduate studies (EVU) of the
30 Norwegian Police University College (NPUC). Further we have conducted a
31 thorough review of the quality-reports (written by the police educators and later
32 discussed by educators and leaders). Through analyzing this data material, we aim
33 to bring visibility to how all four of Bronfenbrenner's contextual layers have
34 influenced their perception and practice on teaching quality. This includes
35 examining the impact of colleague proximity, management involvement, societal
36 risk, the lack of guidelines, and the relativization of temporality and spatiality in
37 teaching quality as a practice, among other factors.

38 By examining these experiences, our objective is to provide insights into how
39 the context of the pandemic has shaped teaching quality as a practice. This
40 includes empirically exploring the ways in which contextual proximity and
41 periphery have influenced the perceived quality of teaching. Through this
42 exploration, we seek not only to better understand the present situation but also to
43 draw lessons for the future. In an increasingly interconnected and rapidly changing
44 world, developing a deep understanding of the context of teaching is crucial for
45 enhancing education quality.

1 As we navigate our way through and beyond the pandemic, it is essential to
 2 continually re-evaluate and adapt our concept of teaching quality. This article
 3 contributes to the ongoing dialogue by providing a focused analysis of the context
 4 of teaching during a period of profound societal disruption and changes in crime.
 5 In doing so, it highlights the importance of context in shaping teaching quality and
 6 offers insights for educators, policymakers, and researchers seeking to enhance
 7 teaching practice in these challenging times.

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 10 **Theoretical Framework:**
 11 **Bronfenbrenner's PPCT Model and the Context Perspective**

12
 13 Urie Bronfenbrenner's bio-ecological systems theory, articulated in his
 14 Process-Person-Context-Time (PPCT) model, is a cornerstone in the field of
 15 human development (Bronfenbrenner & Morris, 2007; Rosa & Tudge, 2013). This
 16 model provides a comprehensive framework for understanding the complex
 17 interplay of factors affecting an individual's growth and development as an
 18 individual within a group, organization, or society (Christensen, 2016; El Zaatari
 19 & Maalouf, 2019). In the context of this article, we use Bronfenbrenner's PPCT
 20 model to analyze the multifaceted influences on teaching quality as a practice
 21 during the COVID-19 period, with a particular focus on the context perspective.

22 The PPCT model is constituted by four interconnected elements: process,
 23 person, context, and time (Bronfenbrenner & Morris, 2007). The process
 24 component refers to the interactions between the individual and their environment.
 25 The person component emphasizes the individual characteristics that influence and
 26 are influenced by these interactions. Time refers to the temporal dimension,
 27 encompassing both the historical period and the timing of specific events or
 28 experiences. Figure 1 below gives a visual overview of teaching quality as practice
 29 presented within the framework of Bronfenbrenner's bio-ecological systems model
 30 (Sookermany et al., (2023a, 2023b).

31 Central to our discussion in this article is the context element. Bronfenbrenner's
 32 model conceptualizes context as a bio-ecological system of systems, structured as
 33 four different layers based on the principle of proximity: the microsystem,
 34 mesosystem, exosystem, and macrosystem (Bronfenbrenner & Morris, 2007).

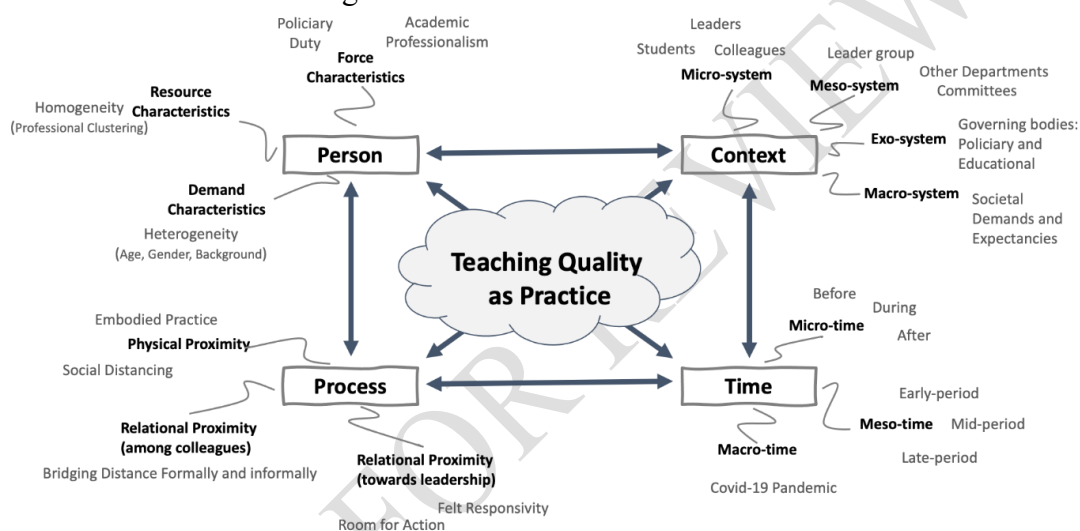
35 The microsystem is the closest environment to the individual, encompassing
 36 immediate relationships and settings such as family, school, or work. The
 37 mesosystem refers to the interactions between different microsystems, like the
 38 relationship between school and family. The exosystem includes environments
 39 that the individual does not directly interact with, but that still impact their
 40 development, such as parents' workplaces or wider community structures. The
 41 macrosystem, the outermost layer, represents broader societal constructs like
 42 cultural norms, economic systems, and in the context of this article, the
 43 overarching effects of the pandemic.

44 Bronfenbrenner's model (Bronfenbrenner & Morris, 2007) claims that all four
 45 layers are present in an individual's life, and the proximity to these systems affects

1 their visibility and formative power in the individual's daily life and behaviors.
2 The closer the system, the more noticeable its influence.

3 In the context of teaching quality during the COVID-19 period, the context
4 perspective becomes particularly salient. The pandemic has profoundly disrupted
5 and reshaped all layers of context, from the microsystem to the macrosystem. For
6 educators especially in specialized fields like police training, the disruptions
7 necessitated significant adjustments not only in the mode of delivery but also in
8 ensuring the pedagogical effectiveness of such modes (Davies & Al Sharefeen,
9 2022). These adjustments have been crucial in maintaining the quality of teaching,
10 thus impacting teaching practices (Carrillo & Flores, 2020; Fatani, 2020).

11
12 *Figure 1.* Teaching Quality as Practice presented within the Framework of
13 Bronfenbrenner's Bio-ecological Model



14 In this article, we explore how these contextual changes have influenced
15 teaching quality as a practice. We particularly aim to draw insights from the
16 experiences of educators navigating these changing contexts, shedding light on
17 how the proximity and periphery of contextual layers affect pedagogical practices
18 and perceptions of teaching quality.

19 By applying Bronfenbrenner's (2007) context perspective, we aim to provide
20 a nuanced understanding of the diverse environmental influences on teaching
21 quality during the COVID-19 period. This theoretical framework allows us to
22 move beyond an individualistic view of teaching quality and instead consider the
23 broader ecological systems in which teaching and learning occur (Wittek & Habib,
24 2012), providing a richer and more comprehensive picture of the challenges and
25 opportunities faced by educators during these unprecedented times.
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The data consists of 20 qualitative interviews with police educators and their closest leaders from EVU who had key tasks related to planning, implementation, and evaluation of education during the pandemic. Participants are strategically

1 chosen for variation and breadth, with different educational backgrounds,
2 professional experiences, and geographical locations. The term 'participants' is
3 deliberately used to denote those from whom we collected our data, aligning with
4 Morse's (1991) perspective that such terminology reflects their active engagement
5 in our study. This choice underscores the dynamic and contributory role of these
6 individuals in our research process, consistent with their strategic selection based
7 on varied educational backgrounds, professional experiences, and geographical
8 locations to enrich the study's diversity and depth.

9 The semi-structured interview guide was designed based on Bronfenbrenner's
10 theory (Bronfenbrenner & Morris, 2007; Siraj & Huang, 2020; Tudge et al., 2009;
11 Xia et al., 2020) and issues that have previously been shown to be important for
12 the quality of education in practice (Helgesen, 2020). The interviews were
13 conducted both digitally and physically, with durations between 60 and 90
14 minutes. They were recorded and transcribed.

15 The questions in the interviews revolved around the participants' experiences
16 and perspectives on various aspects of their roles during the pandemic. These
17 included their closeness to colleagues, the involvement of their managers, any lack
18 of guidance they experienced, perceptions of social risk, and their experiences of
19 time relativization, among others.

20 To deal with the intricacies of the context element within Bronfenbrenner's
21 PPCT model, our methodological approach was multi-layered, ensuring a rich and
22 nuanced analysis of the collected data. Initially, we embarked on an inductive
23 analysis, sifting through the data to unearth recurring themes and patterns (Braun
24 & Clarke, 2006). This analysis revealed a significant correlation between our
25 findings and the preliminary themes that informed our interview guide,
26 highlighting central aspects such as teamwork dynamics, leadership engagement,
27 uncertainty, societal influences, and temporal factors as pivotal to our participants'
28 narratives.

29 Building on these insights, we transitioned to a deductive, theory-informed
30 analysis to delve deeper into our data (Braun & Clarke, 2006; Fauskanger &
31 Mosvold, 2014; Tjora, 2013), employing Bronfenbrenner's framework as a lens to
32 examine the micro, meso, exo, and macro system levels (Bronfenbrenner &
33 Morris, 2007). Each interview was explored, with relevant statements that shed
34 light on the context dimension being highlighted, extracted, and categorized. This
35 process was conducted individually for each interview before synthesizing across
36 the dataset, allowing us to map out the contextual landscape influencing the
37 phenomena under study.

38 To enhance the credibility of our findings, we engaged in discussions with
39 both participants and scholarly peers, facilitating a validation process that honed
40 our interpretative accuracy and enriched our analysis. This iterative dialogue
41 ensured that our analytical journey was not only anchored in theoretical rigor but
42 also resonated with the lived experiences of our study's participants and the
43 broader research community.

44 This methodological strategy, characterized by its blend of inductive,
45 deductive, and abductive reasoning, was instrumental in grounding our analysis
46 theoretically while fostering a reexamination and deepened understanding of the

1 data (Tjora, 2013). By focusing specifically on the contextual levels defined by
2 Bronfenbrenner—micro, meso, exo, and macro—we were able to discern how
3 these varying layers of environmental systems interact and shape the educational
4 landscape, thus providing comprehensive insights into the context element of the
5 PPCT model.

8 **Ethical Considerations**

10 The study was conducted in line with research ethical guidelines (NESH,
11 2021) and was reported to the Norwegian Agency for Shared Services in
12 Education and Research (SIKT) (reference number 733619). The participants
13 received information and gave written consent to participate. The researchers were
14 aware of the potential ethical issues, such as discussing sensitive topics, and they
15 made an effort to allow participants to renegotiate consent during the process. The
16 researchers also acknowledged their roles as "insider researchers" (Brown, 1996)
17 and were aware of how this might impact the information gathered and their
18 reflections on the data. By engaging in continuous discussions throughout the
19 project period the research team were able to balance their roles as 'insider
20 researchers.' They managed to be supportive colleagues to the participants, while
21 still maintaining an academic critical perspective informed by theory.

22 One key lesson learned from this research is that the applied method for
23 investigating teaching quality provides a more nuanced understanding of how
24 different members of a department perceive, debate, and negotiate teaching
25 quality. This insight might inform future research design and implementation,
26 allowing for the capture of a richer diversity of experiences and perspectives.

28 **Context Perspective – Findings**

30 **Micro-system**

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33 In the face of the pandemic's enforced distancing, the intimate fabric of our
34 daily interactions—what Bronfenbrenner characterizes as micro-systems—were
35 stretched to their limits (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2007).
36 These micro-systems, the center of our social ecology, consist of the interactions
37 and relationships that occur in proximity, such as those with family, friends, and
38 immediate colleagues (Tudge et al., 2009). Our findings suggest that while physical
39 distance was mandated, the faculty members found avenues to maintain the essence
40 of these systems virtually.

41 One police educator described improvising with his partner to replicate their
42 pre-pandemic routine: "We call each other in the morning, and we leave the phone
43 open. We sit and work as if we are sitting next to one another ... We are together
44 separately." This quote demonstrates an adaptive approach to preserve the micro-
45 system's function, highlighting the resilience and creativity of individuals in
46 sustaining close relationships despite physical barriers.

1 Moreover, our participants revealed a proactive stance in nurturing their
2 professional relationships. A civilian academic shared how a relationship with a
3 pedagogy teacher from a class she had taken recently became a resource in
4 realigning her own teaching at the beginning of the pandemic, “She followed us a
5 bit along the way, so we got a bit of extra follow-up on the pedagogics... We got a
6 particularly good connection through this.” This quote underscores the significance
7 of established relationships as a springboard for continued professional growth and
8 support, even in the absence of traditional face-to-face interactions.

9 Bronfenbrenner emphasized the role of micro-systems as the foundational
10 level of human interaction where the individual's most immediate surroundings
11 and activities occur (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2007). In
12 our study, it became evident that the pandemic did not dissolve these micro-
13 systems but rather prompted an evolution in their expression. Participants reported
14 leveraging technology to recreate the micro-system's intimacy, hinting at an
15 expanded definition of proximity beyond the physical sense.

16 An employee with a police background detailed leveraging his network for
17 problem-solving, indicating that while the pandemic erected barriers, it also
18 unveiled new possibilities for relationship-building: “We could bounce ideas off
19 each other ... we have addressed one thing at a time to keep the wheels turning.”
20 This example reflects the dynamic nature of micro-systems and their capacity to
21 adapt and reconfigure in response to external challenges.

22 Our research illustrates that the micro-systems, defined by Bronfenbrenner &
23 Morris (2007), are not static entities but living, breathing constructs that can morph
24 to meet the demands of the moment. The pandemic's constraints necessitated a
25 reimagining of interaction and support within these systems, revealing both their
26 fragility and their profound adaptability. It is through these closest of connections
27 that individuals found comfort and continuity, crafting an aspect of normalcy in an
28 unprecedented time.

30 **Meso-system**

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32 Transitioning from the proximal environments of micro-systems to the
33 broader context of meso-systems, our findings explore the spaces where these
34 personal ecosystems and institutional structures meet and interact. Bronfenbrenner's
35 concept of the meso-system includes the connections and activities happening
36 between two or more settings that involve the individual in development
37 (Bronfenbrenner & Morris, 2007). In our study, this meso-system is seen in how
38 home offices, digital classrooms, and the administrative frameworks of educational
39 institutions are closely connected, directly influencing each other.

40 The onset of the pandemic compelled a swift pivot to digital platforms,
41 altering the traditional meso-system dynamics. One informant, a senior adviser,
42 captured the essence of this shift: “We sat in a meeting room, went through our
43 portfolio of studies, and had a kind of concrete assessment of the study plans,
44 descriptions of learning outcomes, and established what would be possible to do
45 digitally.” This statement reflects the practical adaptations institutions undertook,

1 redefining their meso-systems to uphold educational integrity against the tide of
2 uncertainty.

3 The interplay between micro- and meso-systems became a dialogue of
4 adaptation and negotiation, as individuals and institutions sought balance between
5 wants and needs, challenges, and regulations. A police educator reported, "Then
6 we used evaluations from the local instructors... Then we tried to adapt accordingly."
7 This reflection demonstrates the reciprocal nature of meso-systems, where
8 feedback loops between various micro-systems—like individual officers and their
9 departments—guide collective actions and decisions.

10 As Bronfenbrenner proposes, the meso-system is crucial in shaping outcomes
11 by providing the connective tissue between an individual's immediate environment
12 and the larger institutional context. The introduction of a crisis management team
13 at NPUC is a telling example of an emergent meso-system, established to navigate
14 the pandemic's challenges. Weekly staff meetings were held with the rectorate,
15 which in turn led to local measures. These meetings represent meso-systemic
16 responses to the crisis, serving as critical junctures for decision-making and
17 support dissemination.

18 Moreover, our findings reveal a concerted effort within meso-systems to
19 maintain the quality of education. The informant from the management group
20 described the evaluative process: "Concrete assessment of the study plans,
21 learning outcome descriptions... were put in place." This narrative underscores the
22 behind-the-scenes negotiations and prioritizations necessary to sustain educational
23 services.

24 Yet, challenges within the meso-system surfaced, particularly around digital
25 competency and resource allocation. A civilian academic's experience speaks to
26 this tension: "I feel there are some administrative departments that become the
27 bottleneck." Such insights expose the strains within meso-systems when adapting
28 to new modalities of operation.

29 In conclusion, our study illustrates that meso-systems, while robust in their
30 ability to connect and support various micro-systems, are also subject to strain
31 under rapid transformation. The pandemic has tested the resilience of these
32 systems, revealing both their vulnerabilities and their capacity for innovation. The
33 voices of our participants highlight the collaborative spirit that defines the meso-
34 system, echoing the collective endeavor to uphold educational standards and
35 societal functions amidst a global crisis. Still, there are indications that both
36 leaders and employees wish for more initiative from the other, and that their
37 understanding of facilitation and what adapting to the situation looks like are not
38 necessarily the same.

39 **Exo-system**

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41 In exploring the exo-system's influence on educational practice during the
42 pandemic period, our findings delineate a complex interplay between external
43 policies and the inner workings of the NPUC. Bronfenbrenner's bio-ecological
44 systems theory illuminates how broader socio-political structures penetrate and
45 shape the intimate realm of micro-systems, those immediate interactions and

1 relationships crucial to an individual's development (Bronfenbrenner & Morris,
2 2007).

3 The exigencies of the pandemic introduced a new legal framework that
4 functioned as a directive force on the NPUC's operations. The crisis law, an exo-
5 systemic element, mandated sweeping changes including the shift to digital
6 teaching and the implementation of infection control measures (Solberg et al.,
7 2021). These government-enforced regulations, though distant from the day-to-
8 day interactions of our participants, had profound ripple effects on their
9 professional practices and the micro-system dynamics.

10 Participants within the NPUC community articulated the tension between
11 maintaining high educational standards and adapting to a rapidly evolving
12 professional field. A senior adviser encapsulated this sentiment: "We sat in a
13 meeting room, going through the study plans and outcomes, grappling with what
14 could feasibly translate into a digital format." This statement captures the strategic
15 maneuvering required to navigate the exo-system's pressures while preserving the
16 integrity of the micro-system's educational interactions.

17 The voice of the participants is particularly salient when discussing the
18 adaptation to these exo-systemic pressures. A civilian academic lamented the lack
19 of immediate support in transitioning to digital platforms: "I often experience that
20 decisions are made, and then there hasn't been foundational efforts taken to
21 understand the on-the-ground needs. That's a bit unfortunate." This description
22 echoes Bronfenbrenner's assertion that effective functioning within micro-systems
23 relies heavily on the support and resources from higher systemic levels.

24 Moreover, the faculty's innovative responses to these challenges underscore
25 their resilience and dedication. As earlier mentioned, a police trained educator
26 described how he and his partner circumvented the physical separation by
27 establishing a work routine that simulated proximity "working together separately."
28 This act of creating a 'virtual micro-system' underscores the adaptability of
29 individuals in maintaining essential communication and collaboration, despite
30 exo-systemic barriers.

31 This adaptive ingenuity also extended to the meso-system, where the
32 leadership and support departments of NPUC played a pivotal role. The formation
33 of a crisis management team and the adaptation of study administrative rhythms to
34 pandemic constraints underscore the meso-system's responsiveness to the exo-
35 systemic changes.

36 In conclusion, our findings reveal that the exo-system, during the pandemic,
37 exerted a considerable influence on the daily professional lives of those within
38 NPUC. The narratives of our participants, framed by Bronfenbrenner's bio-
39 ecological model, highlight a dynamic interplay where external forces challenge
40 and reshape the micro-systems, compelling individuals to devise creative strategies
41 to uphold the quality of education. The exo-system, though distant, is deeply
42 interwoven with the immediate educational environment, influencing decisions,
43 pedagogical approaches, and ultimately, the evolution of the teaching and learning
44 experience.

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1 **Macro-system**

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3 As we probe deeper into the macro-systemic influences on the educational
4 sphere during the pandemic, our findings underscore the pervasive impact of
5 societal attitudes, cultural norms, and overarching policies on the NPUC.
6 Bronfenbrenner's conceptualization of the macro-system serves as a lens through
7 which we can understand the broadest contextual factors that frame the subtler
8 dynamics of micro-systems (Bronfenbrenner & Morris, 2007).

9 The societal response to the pandemic, reflective of the macro-system, created
10 a backdrop against which all educational entities had to navigate. Our participants'
11 experiences reveal how this macro backdrop informed the ethos and practices
12 within NPUC. A palpable shift in cultural norms around work and communication
13 gave rise to innovative educational strategies, which would have been inconceivable
14 in a pre-pandemic world.

15 The macro-system's influence was also manifested in the public discourse
16 surrounding the role of education during a crisis. The societal valuation of 'critical
17 to society' roles underscored the importance of maintaining robust educational
18 standards for essential services like police education. Still, among faculty at the
19 NPUC there were voices that questioned the reality of this regarding our
20 educational programs: One informant said "We were several colleagues discussing
21 that we found it a bit strange that the Police University College continued
22 operations when all other universities and colleges were closed. Are we so unique
23 and indispensable? ... Yes, indeed, it's important to have police, but there are quite
24 a few other educations that are also important."

25 Here, the understanding of NPUC's education is compared with other
26 universities and colleges, raising the rhetorical question: 'are we [NPUC] so
27 unique?' in comparison to them. A police trained educator elaborates on this
28 criticism by asking whether NPUC prioritized correctly in terms of which
29 programs were conducted, that is, were it the unique courses related to the time-
30 critical aspects of the pandemic period that were prioritized: "In such an
31 extraordinary situation as the corona pandemic has been, I think that driving
32 instructors are prioritized. That they are more important than border control
33 instructors. To me, that's a bit strange."

34 This societal expectation, a macro-systemic pressure, shaped the micro-
35 systems within NPUC where educators and students interact. Educators felt a
36 weighty responsibility to deliver quality education amid constraints, a challenge
37 that was echoed in their pedagogical adjustments and the resilience with which
38 they approached the pandemic barriers: One police trained educator expressed "I
39 just jumped into the car as an examiner during the period when there were face
40 masks and all that. We didn't have restrictions on it, and I went the extra mile so
41 that the students could get their certificates of competence." Indicative of the
42 macro-system's reach, global health concerns translated into local action, with
43 faculty and students at NPUC adapting their behaviors and expectations
44 accordingly.

45 In summary, the findings from our investigation into the macro-systemic
46 effects on education during the pandemic reveal a complex tapestry of influences.

1 The societal narrative, public policies, and cultural shifts collectively impinged
2 upon the micro and meso-systems within NPUC. Participants' voices, framed by
3 Bronfenbrenner's bio-ecological systems theory, elucidate how macro pressures
4 instigated profound transformations in educational practices, driving innovation,
5 collaboration, and a re-imagining of the pedagogical landscape. The macro-
6 system is not merely a distant backdrop but an active force that shapes and is
7 shaped by the lived experiences of educators and students alike.

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Conclusion

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12 The COVID-19 pandemic has served as a powerful catalyst for a
13 comprehensive reassessment of teaching quality as a practice, as shown through
14 the lens of Bronfenbrenner's bio-ecological systems theory (Bronfenbrenner, 1986;
15 Bronfenbrenner & Morris, 2007). As explored throughout this article, the
16 disruptions brought about by the pandemic have had profound implications on the
17 context perspective, stretching from the intimate microsystems of personal
18 relationships to the macrosystems encompassing societal norms and cultural
19 constructs. The resilience and adaptability demonstrated by police educators in
20 maintaining the integrity of these systems, despite physical distancing, have been
21 both necessary and commendable.

22 Our findings indicate that the enforced separation did not erode the
23 microsystems, but rather transformed them, with technology serving as a conduit
24 for preserving and even strengthening interpersonal connections and professional
25 collaborations. This evolution, while challenging, has also revealed the capacity
26 for innovation that exists within the education sector. The mesosystems, too, have
27 undergone a recalibration as the interplay between home and educational
28 environments took on new forms, elucidating the adaptability of these
29 interconnected systems.

30 At the exosystem level, the indirect influences on teaching quality, such as
31 organizational changes and policy shifts, have prompted educators to navigate new
32 landscapes of practice without direct precedent. Meanwhile, the overarching
33 macrosystem has been marked by a collective experience of the pandemic,
34 influencing cultural and societal attitudes toward education.

35 The application of Bronfenbrenner's theory to the context of the pandemic has
36 provided a valuable lens through which to examine and understand the multiplicity
37 of factors influencing teaching quality. It has underscored the interconnectedness
38 of individual, relational, and systemic elements, and the importance of considering
39 these layers when aiming to enhance educational practices.

40 As we move forward, the lessons learned during this period must inform our
41 ongoing efforts to refine the concept of teaching quality. The adaptability,
42 creativity, and resilience shown by our police educators are qualities that should be
43 integrated into future pedagogical strategies. By embracing the contextual layers
44 of Bronfenbrenner's bio-ecological systems theory (Bronfenbrenner, 1979;
45 Bronfenbrenner & Morris, 2007), we can strive for a holistic approach to teaching
46 that is responsive to both the immediate and extended environments in which

1 learning occurs. This article thus contributes not just a reflection on a moment of
 2 crisis, but a strategic direction for future educational endeavors, emphasizing the
 3 enduring relevance of context in shaping quality teaching and learning experiences.

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