DR. ALEKSANDRA GULASARYAN (Orcid ID : 0000-0002-6759-5032)
MS. GILLIAN AITKEN (Orcid ID : 0000-0002-5492-1943)

Article type : Cross-Cutting Edge

cross-cutting edge

How can inhabited institutionalism inform the analysis of medical education?

Aleksandra Gulasaryan[1], Gillian Aitken[1], Tim Fawns[1], Derek Jones[1], Jordan Napier[2], Kim Walker[3]

[1]Edinburgh Medical School: Medical Education, University of Edinburgh
[2]School of Medicine, University of Dundee
[3]School of Medicine, University of Aberdeen

CORRESPONDING AUTHOR
Aleksandra Gulasaryan, PhD, Edinburgh Medical School, University of Edinburgh, Chancellor's Building, Little France, Edinburgh EH16 4SB, UK.
Tel.: +44 (0) 1312426536
E-mail: aleksandra.gulasaryan@ed.ac.uk

Aleksandra Gulasaryan ORCID iD https://orcid.org/0000-0002-6759-5032

Gillian Aitken ORCID iD https://orcid.org/0000-0002-5492-1943

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/medu.14587

Tim Fawns ORCID iD https://orcid.org/0000-0001-5014-2662

Derek Jones ORCID iD https://orcid.org/0000-0003-2197-7657

Jordan Napier ORCID iD https://orcid.org/0000-0003-4693-1022

Kim Walker ORCID iD https://orcid.org/0000-0001-8873-2270

FUNDERS

Scottish Medical Education Research Consortium

R46490 – SMERC Large Grant.

CONTRIBUTIONS

All authors contributed to the conception, drafting and subsequent revision of this paper. All authors approved the final manuscript for submission.

COMPETING INTERESTS

None.

ACKNOWLEDGEMENTS

None.

ETHICAL APPROVAL

Not applicable.

Abstract

CONTEXT Medical schools are complex organizations existing at the intersection of higher education and healthcare services. This complexity is compounded by many competing pressures and drivers from professional and regulatory bodies, the wider political environment and public expectations, producing a range of challenges for those involved in all stages of medical education. There are established approaches that have been used to address research questions related to these challenges; some focus on organizational structures, characteristics, and performance; others on the interactions that take place in a particular setting. Less common are approaches that integrate data on macro-level structures with the micro-level interactions of the people who inhabit those structures. Looking at the interaction of the macro and the micro opens up possibilities for the new insights.

FRAMEWORK We propose using an approach with roots in social theory – Inhabited Institutionalism (II) – that is largely unexplored in medical education. II has been described as Janus-faced, looking both outwards, at the broader context of medical education, and inwards, at the ways in which meanings are constructed and re-constructed by participants within a particular setting.

METHODS After describing the theoretical framework of II, we explain how it can be used to understand medical education as subject to both broader societal structures (the macro-level) and interactions between people (the micro-level), as well as – crucially – their mutual influence.

CONCLUSION II offers the opportunity to combine macro and micro level perspectives, leading to a more expansive understanding of the operation of medical education which sees its form and function as neither entirely determined by structures nor a construction of individuals engaged in it. In doing so, it potentially offers a valuable way of considering the intractable problem of how to successfully manage change, offering a combined top-down and bottom-up perspective.

1 INTRODUCTION

Medical education, at all levels, typically takes place at the juncture of various complex organizations, including university academic departments, healthcare providers and professional bodies. Throw into this mix what seems to be almost continual change in the structure of healthcare delivery, clinical innovations, political context and social change, and the result is a dizzying array of variables to juggle. For those with an interest in exploring such issues as the effects of organizations and socio-economic variables on student drop-out rates, organizational cultures and patient safety, the educational environment, the globalization of medical education, or the relative dominance of professional groups, finding a suitable approach is challenging. Researchers have sought to address these issues using a range of theories and methodologies, including ethnography,[1] activity theory,[2] systems theory,[3] grounded theory,[4] and surveys.[5]

Although these approaches all have a role to play and contribute valuable knowledge, they tend to reflect either only institutionalism (which focuses on the structure and operation of organizations, and the wider culture within which they exist), or interactionism (the analysis of small-scale local interactions between members of organizations). There is, however, growing interest in approaches that seek to capture the complex interactions between structures and people, combining both a macro (institutional) focus *and* attention to micro (interactional) phenomena.[6, 7] We consider the potential value of introducing another approach, *inhabited institutionalism* (II), that aims to address some of the "wicked problems" of medical education.[8] In this cross-cutting edge paper, we outline the key features and concepts of II and provide illustrations of how it can be used to bridge the gap between macro and micro levels of analysis when addressing questions concerning medical education.

2 CONCEPTUAL FRAMEWORK

Haedicke and Hallett summarize the II approach as follows:

"In its questions and its methodological design, II research is Janus-faced. Methodologically, researchers look outward to the broader relationships and understandings that condition organizational life, and inward toward the construction of meaning in organizational settings. Analytically, they

move between quasi-deductive moments and more inductive moments, with the moments of surprise that inevitably arise in qualitative research serving as a shifting point between these positions."[9(p99)]

II moves away from a focus on individuals and organizational structures towards a combined consideration of social interactions and coupling in an effort to reveal how and where change occurs in the spaces that are inhabited within organizations.

The II perspective combines two traditionally different approaches in social theory: new institutionalism (NI) and symbolic interactionism (SI). The proposition is that the combination works well because it allows new institutionalism (which provides the macro perspective) and symbolic interactionism (with its attention to the micro-interaction and local meaning) to join forces and thus "inhabit" institutions with people. Thus, it acknowledges that whilst organizations are shaped and constrained by forces outside the control of individuals, they are populated by people who impose their own sense on the situations they find themselves in, and they do this in interaction with other people. To get a better idea of how this works in practice, it is necessary, first, to understand the NI and SI contributions to II. Inevitably, our account skates over some differences between the ways different theorists use different terminology.

2.1 New institutionalism

In this paper we follow sociological convention and use the term "institution" to refer to general and abstract ideas of the university, and "organization" to refer to a specific, actual university. Distinguishing between institutions in the abstract and specific organizations is analytically useful. Specific individuals or groups can have a major influence on the culture and operation of an organization, but they cannot escape the influence of the abstract institution with its associated social norms and expectations.

NI theory posits that organizations are embedded in wider social, cultural, and political environments laden with norms, rules, beliefs, and expectations about appropriate behaviour. To receive legitimacy and support, organizations must and do respond to their environments. By incorporating elements of the institutional environment into their practices and forms, organizations try to generate societal approval, and ultimately – their survival.[10, 11] Without such conformity to external social pressures, organizations may risk resistance to, or provoke interference in, their

activities. It would be very brave (or foolish) of the senior management of a medical school to ignore the current competitive institutional environment of ranking teaching and research, the marketplace of higher education, and neo-liberal globalization.[12, 13]

2.1.1 Organizations and their environments

In the process of conforming to institutional pressures, the organizational forms and practices of universities and medical schools are shaped and changed.[14, 15] Marques and Powell's[12] research provides a convincing example of how UK Schools of Education, as organizational strategic actors, respond to the competitive environment created by the rise of ratings and rankings, particularly in relation to instruments such as the Research Excellence Framework (REF). The authors identified the emergence of new behaviours, including a separation of teaching and research, new research management structures, internal peer review and evaluations, co-writing and coaching practices, and more.[12] Further, the schools use such specific organizational vocabularies as "leaders," "top," "excellence," "quality" in a uniform way, irrespective of their rankings or competitive positions. Looking through the web pages of UK medical schools, it is noticeable that they are embedded in the same highly competitive institutional environment and utilize the same "REF-based" vocabulary[12] as they compete to attract the best students and academics.

2.1.2 Isomorphism

By responding to their environments, organizations undergo changes that make them resemble each other, setting in motion *isomorphic* processes.[16, 17] DiMaggio and Powell describe isomorphism as a "constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions."[18(p149)] This can be seen in the similarities in advertising materials, mission statements, or the articulation of graduate outcomes across medical schools, despite attempts to differentiate themselves in the marketplace. Of course, while the external representation of individual organization may increasingly be isomorphic, each is inhabited by a set of unique individuals with some agency in how they react to, apply, or subvert, policies and directives.

2.1.3 Coupling

Such organizational conformity is often just symbolic, however, meaning that only *loose coupling* exists between organizations and their environments. In other words, there is wriggle room "between policy talk and actual practice."[17(p45)] *Tight coupling,* on the other hand, is where policy and practice are expected to be in complete alignment, and this may create conflict[10]; as can be the case when conflicting pressures come from different parts of complex environments.[19]

Universities, for example, traditionally have had their core activities "only loosely coupled to both their formal structure and their environment,"[20(p23)] which allowed them to function without disruption. Within this, medical schools retain some of the traditional attachment to ideas of academic freedom despite increasing regulatory professional and government control. However, as Dale[13] argues, in recent decades, new challenges are posed by the wider environment (particularly those related to external accountability, ranking systems, students as consumers, and organizational performance indicators), making it more difficult to keep different elements loosely coupled, which, in turn, leads to increasing centralization and control.

2.1.4 Logics

The sets of principles, norms, and taken for granted beliefs that guide individual and collective behaviour in organizations can be understood as *institutional logics*.[21] Varpio et al.[22] provide examples of various institutional logics within medical education: financial accountability; a cohesive education continuum, and academic research, service and teaching. Institutional logics shape interactions on the ground but the exact forms, or "contours," of these logics are subject to ongoing negotiation through social interaction. Thus, the influence of institutional logics is not one-way; actors do not simply "carry" institutional forces, they also shape those forces.[23] Rather than blindly following a "script", people improvise and exercise agency based on their own identity, culture, or habit.[24]

Gordon and Cleland[7] highlight some possibilities for examining organisational change in medical education through institutional logics. For example, tensions between logics of science and care create misalignment between the medical model of 'patients' who must be treated, and broader, community-based preventative health and social care strategies. Similarly, the logics of the market and managerialism are often at odds with professionalism, and the tensions between these logics play

out in pedagogical approaches, concerns around "value for money", conceptions of trust, autonomy and expertise, and student and employer expectations.[25x] These same logics shape (to differing extent) forms of governance that impact on medical education practice (eg, changes to government funding drives privatisation which reinforces managerialism and market logics which constrain ideas about training and education).

However, NI theory does not provide an explicit theoretical framework to explore interactions at the micro-level. II research extends NI theory by turning to a symbolic interactionist perspective. It helps us consider not just the institutional logic driving the enactment of managerialism, for example, also how, and where this manifests within organizations.

2.2 Symbolic interactionism

As a theoretical perspective, symbolic interactionism focuses on processes, encounters, meanings, actions and interactions at the micro-level, which "provide a foundation for thinking about the constitutive role of people in organizations".[26(p4)] Blumer,[27] a key figure in symbolic interactionism, points out that the meanings of the things people encounter are not static, they are altered through the process of interpretation. For Blumer, interpretation is not an unchanged application of previously established social meanings, but a process in which people use meanings as instruments to guide and form their actions. Thus, although medical schools have many common surface features, they also have their own idiosyncratic aspects that newcomers must negotiate.

One example of symbolic interactionist research in healthcare education is Vinson's[28] ethnographic study in which she followed a cohort of first-year medical students and investigated how, through their interactions, they came to an understanding of the white lab coat as a status symbol. Novice medical students then engaged in "status management" behaviour: sometimes, they actively avoided wearing the coat to eschew expectations of medical competence; at other times, they deployed the white coat in low-risk situations to invoke professional status. Students also policed the negotiated meaning by gently teasing peers for wearing white coats in inappropriate situations.

In summary, symbolic interactionism sensitizes researchers to the local, intra-organizational meanings arising from interactions as people do things together, sometimes in conflict and sometimes

in concert.[23] Interactions involving "working together", and the meaning that arises from them, is foregrounded over the actions of individuals.

2.3 Inhabited institutionalism: Combining new institutionalism and symbolic interactionism

Hallett and Ventresca[23] elaborate three markers of combining these two theoretical approaches in the II perspective. The first marker, "double embeddedness," means that II research pays close attention to the local contexts of people's activities, but also places people's reality in the broader (extra-local) organizational environment and recognizes its constraining effect. The second marker, which emphasizes meanings, indicates that II research engages with both local meaning (resulting from interactions between individuals in a defined context) and more abstract norms, beliefs, and values pertaining to institutions. The authors particularly highlight the role of broad institutional categories such as "the market," "the family," or "the state," which "frame organizational dynamics and establish the conditions of possibility for action in contemporary, rationalized, political and organizational contexts."[23(p227)] The third marker is a "skeptical, inquiring attitude" towards assumptions about the operation of organisations, using empirical data to reveal hidden complexity.[23] This involves the careful reconciliation of micro and macro contexts to produce accounts of "peopled" institutions.

3 PRACTICAL APPLICATIONS OF INHABITED INSTITUTIONALISM

II research has been used to investigate schools,[29, 30] universities,[31] and, most relevant to our purposes, healthcare organizations and medical education. For example, VanHeuvelen[32] combined observations and interviews within an II approach to explore the impact of architectural changes from open-bay to "patient-centred" single patient wards in a Neo-Natal Intensive Care Unit (NICU). She considered how staff adjusted their day-to-day working practices and interactions in the context of this new physical workspace, which derived from organizational policy decisions based on "best practice" in environmental design. In this case, the shift from a more open ward layout to more private spaces led to feelings of staff isolation and interfered with previous working practices, which had been characterized by frequent collaboration and task sharing. VanHeuvelen's work shows how macro level activity (policies and architectural change), in combination with local cultures, shapes practices

in unexpected ways, and also how these organisational structures are reinterpreted through micro-level activity (eg, informal practices). In VanHeuvelen's[32] study, the institutional logic of "best practice" is visible in the decision at macro level about what healthcare should look like, without sufficient recognition of local, embedded meanings and the requirement for practitioners to re-negotiate interactions with colleagues.

In a second example, Everitt et al.[33] used II to revisit a classic symbolic interactionist ethnographic study of medical students in USA in the 1950s and 1960s, "Boys in White," by Becker et al.[34] In qualitative interviews with thirty-three medical students at various stages of training, Everitt and colleagues introduced excerpts from the original study to explore the contemporary resonance of the findings. This would be interesting in itself; however, they also attempted to address the criticism that studies such as "Boys in White" paid insufficient attention to social structures by locating data in the context of "macro-institutional" forces. For example, students' learning strategies and career decisions were significantly influenced by the major increase in the cost of contemporary medical education. They were very aware of the debt they were accruing, and which specialties afforded the highest salaries. Further, while Becker et al.[34] found that students developed strategic approaches focused on identifying and giving faculty "what they want," Everitt et al.[33] found that present day students are driven more by the high stakes United States Medical Licensing Exam (USMLE), which had generated a raft of highly accessed extra-university resources in order to aid passing the exam. This shows the loose coupling between individual medical schools and their assessment processes, which exist alongside national licensing processes. This study highlights that organizations exist in the context of other institutions that exert pressure on them to conform to certain standards and shape their organizational forms and practices.[14, 15] An II approach could further explore the coupling of institutional and local procedures and how the concerns of universities, healthcare institutions and external accreditation bodies are patched together through local assessment practices (eg, through the specification and realisation of standards, or the negotiation of required knowledge).[35]

Reay et al.[36] explored the changing professional identity of family physicians in Western Canada in relation to a primary health care reform through which they were required to work with multidisciplinary teams. Although not explicitly framed as II, the approach is evident in their research question ("How can social actors facilitate changes in collective professional role identity by

reinterpreting institutional logics and their relationships?"[36(p5)] and in their use of literature from both NI and SI. Through analysis of interviews (with physicians, other health professionals and managers) and documents, they identified a shift in identity from autonomous expert to informed team lead. This shift, although necessitated by structural reform, happened successfully through interactions between stakeholders in the context of conflicting institutional logics, and, in particular, market, corporate, and professional logics.

There are many questions in medical education that could be addressed by taking an II approach. For example, our understanding of faculty development could benefit from examining the locally embedded meanings and practices of clinical teachers in relation to how they are enabled and constrained by structural elements such as work plans, contracts, pay structures, promotion and recognition processes, and the pressures exerted upon them by multiple institutions (eg, health services, universities, regulators, public and private funding bodies, etc.). Combining this with analysis of how these structures play out at the micro level (eg, through informal practices and formal interventions) could give us a more complex picture of how approaches, practices and identities of clinical teachers actually develop and how broader contextual influences manifest in local interactions. Such research could involve a mix of methods such as ethnographic observation (eg, of teaching and faculty development practices), document analysis (eg, of policies across related institutions, reward processes, curricula statements, funding models) and interviews (eg, with clinicians, faculty developers, managers, regulators). An example line of inquiry might be how tensions between clinical practice and education are entangled in policy statements, time allocation in contracts and workload models, and localized cultures and discourse.

Another promising area for applying II is the development of online and hybrid education within medicine. The recent, rapid expansion of online education, including assessment, due to the Covid-19 pandemic, resulted in a diverse and challenging set of experiences, with mixed results. Yet the micro-level practices of teachers and students were shaped by a mix of established and rapidly-evolving infrastructure and policy, as well as by local, national and global cultures of engagement with technology in education (eg, social media use, FOAMed, privacy and data governance, concerns about student surveillance, the commercial agendas of EdTech companies, the jumble of hype and evidence-based practice within journals and online media). While isomorphic processes are evident in

the widespread use of technologies like Zoom and Microsoft Teams, and in frequent articulations of concerns about "student engagement", choices about requiring "cameras on" etc.,[37] attempts to support consistent and coherent approaches through standardized platforms and "best practices" are differently realized at a local level by educators and students.[38] II could provide a way of generating a more complex picture of this interaction between micro- and macro-level forces, and give us a stronger basis for supporting educators to develop online and hybrid practices in the future. Such projects would benefit from a broad approach to data collection (eg, interviews; policy, media and curriculum documents; observations and usage data) because of the entangled nature of digital technology within education in relation to political, economic, cultural and pedagogical factors.[39]

A significant challenge for II research is that it is onerous, involving a complex process of analysis and interpretation of data about a range of stakeholders. It requires knowledge of sociological and organisational concepts and the ability to not only identify institutional forces (isomorphism, coupling, logics) and localized practices, cultures and embedded meanings, but also to reconcile these macro- and micro- level insights into a form of coherence. Rather than thinking of different contexts and perspectives as separate, researchers must consider how they are patched together by people engaging in localised practices.[35] Here, we might use the markers of *double embeddedness* (paying attention to local and extra-local contexts), local and abstract institutional *meanings*, and a *skeptical, inquiring attitude* as both guides and benchmarks of quality.[23]

4 CONCLUSION

Inhabited Institutionalism (II) research analyses empirical evidence in order to examine the integration of the experiences of individuals and the meanings they attach to their situation with information about the institutional environment within which those experiences take place. A growing number of papers point to the potential utility of an II approach in exploring healthcare professions education. However, the utility and value of any framework evolves over time as it is applied and refined. We have suggested faculty development and the shift to online and hybrid education as two productive areas for the application of II research.

REFERENCES

1. Kuper A, Nedden NZ, Etchells E, Shadowitz S, Reeves S. Teaching and learning in morbidity and mortality rounds: an ethnographic study. *Med Educ.* 2010;44(6):559-569.
2. Aitken G. A postdigital exploration of online postgraduate learning in healthcare professionals: a horizontal conception. *Postdigital Sci Educ.* 2020;3(1):181-197.
3. Jasnoski MB, Warner RM. Graduate and post-graduate medical education with the synchronous systems model. *Behav Sci.* 1991;36(4):253-273.
4. Kennedy TJ, Regehr G, Baker GR, Lingard L. Preserving professional credibility: grounded theory study of medical trainees' requests for clinical support. *BMJ.* 2009;338:b128.
5. Liu AC, Liu M, Dannaway J, Schoo A. Are Australian medical students being taught to teach? *Clin Teach.* 2017;14(5):330-335.
6. Jones D, Fawns T, Aitken G. Using a theoretical framework to develop postgraduate health professions education research and practice. *MedEdPublish.* 2020;9(1):78.
7. Gordon L, Cleland JA. Change is never easy: how management theories can help operationalise change in medical education. *Med Educ.* 2021;55(1):55-64.
8. Eoyang GH, Mennin S. Wicked problems in health professions education: adaptive action in action. *MedEdPublish.* 2019;8(3):77.
9. Haedicke MA, Hallett T. How to look two ways at once: research strategies for inhabited institutionalism. In: Elsbach KD, Kramer RM, eds. *Handbook of Qualitative Organizational Research*. New York, NY: Routledge; 2016:99-111.
10. Meyer JW, Rowan B. Institutionalized organizations: formal structure as myth and ceremony. *Am J Sociol.* 1977;83(2):340-363.
11. DiMaggio PJ, Powell WW. Introduction. In: Powell WW, DiMaggio PJ, eds. *The New Institutionalism in Organizational Analysis*. Chicago: The University of Chicago Press; 1991:1-38.
12. Marques M, Powell JJW. Ratings, rankings, research evaluation: how do Schools of Education behave strategically within stratified UK higher education? *High Educ.* 2019;79(5):829-846.

13. Dale R. Constructing risk management of HE sector through reputational risk management of institutions; causes, mechanisms and consequences. In: *Universities in the Knowledge Economy (UNIKE), EU Marie Curie Initial Training Network Programme*. Bristol, UK; 2014.
14. Oliver C. Sustainable competitive advantage: combining institutional and resource-based views. *Strateg Manag J.* 1997;18(9):697-713.
15. Scott WR. Lords of the dance: professionals as institutional agents. *Organ Stud.* 2008;29(2):219-238.
16. Morphew CC, Huisman J. Using institutional theory to reframe research on academic drift. *High Educ Eur.* 2002;27(4):491-506.
17. Francisco OR, Byrkjeflot H, Pinheiro R. Higher education and health organizational fields in the age of "world class" and "best practices". In: Pinheiro R, Geschwind L, Lounsbury M, Ramirez Francisco O, Vrangbaek K, eds. *Towards a Comparative Institutionalism: Forms, Dynamics and Logics Across the Organizational Fields of Health Care and Higher Education*. Bingley, UK: Emerald Group Publishing Limited; 2016:35-57.
18. DiMaggio PJ, Powell WW. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *Am Sociol Rev.* 1983;48(2):147-160.
19. Scott WR. *Institutions and Organizations: Ideas, Interests and Identity*. Thousand Oaks, CA: Sage Publications; 2014.
20. Gerber LG. "Inextricably linked": shared governance and academic freedom. *Academe.* 2001;87:22-24.
21. Thornton PH, Ocasio W. Institutional logics and the historical contingency of power in organizations: executive succession in the higher education publishing industry, 1958– 1990. *Am J Sociol.* 1999;105(3):801-843.
22. Varpio L, O'Brien B, Hu W, et al. Exploring the institutional logics of health professions education scholarship units. *Med Educ.* 2017;51(7):755-767.
23. Hallett T, Ventresca MJ. Inhabited institutions: social interactions and organizational forms in gouldner's patterns of industrial bureaucracy. *Theory Soc.* 2006;35(2):213-236.

24. Thornton PH, Ocasio W. Institutional logics. In: Greenwood R, Oliver C, Suddaby R, Sahlin K, eds. *The Sage Handbook of Organizational Institutionalism*. Los Angeles: Sage; 2008:99-128.
25. Damodaran A, Shulruf B, Jones P. Trust and risk: a model for medical education. *Med Educ.* 2017;51(9):892-902.
26. Hallett T, Shulman D, Fine GA. Peopling organizations: the promise of classic symbolic interactionism for an inhabited institutionalism. In: Adler P, ed. *The Oxford Handbook of Sociology and Organization Studies: Classical Foundations*. Oxford; New York: Oxford University Press; 2009:486-510.
27. Blumer H. *Social Interactionism: Perspective and Method*. Berkeley, CA: University of California Press; 1969.
28. Vinson AH. Short white coats: knowledge, identity, and status negotiations of first-year medical students. *Symb Interact.* 2018;42(3):395-411.
29. Tsang KK. The interactional-institutional construction of teachers' emotions in Hong Kong: the inhabited institutionalism perspective. *Front Psychol.* 2019;10:2619.
30. Hallett T. The myth incarnate: recoupling processes, turmoil, and inhabited institutions in an urban elementary school. *Am Sociol Rev.* 2010;75(1):52-74.
31. Everitt JG. Inhabitants moving in: prospective sense-making and the reproduction of inhabited institutions in teacher education. *Symb Interact.* 2013;36(2):177-196.
32. VanHeuvelen JS. Isolation or interaction: healthcare provider experience of design change. *Sociol Health Illn.* 2019;41(4):692-708.
33. Everitt JG, Johnson JM, Burr WH, Shanower SH. Examining healthcare institutions by bringing qualitative data from two eras into empirical dialogue. *Ethnography.* 2020. doi: 10.1177/1466138120913062.
34. Becker HS, Geer B, Hughes EC, Strauss AL. *Boys in White: Student Culture in Medical School*. New Brunswick, NJ: Transaction Books; 1961.
35. Fawns T, Mulherin T, Hounsell D, Aitken G. Seamful learning and professional education. *Stud Contin Educ.* 2021:1-17. doi: 10.1080/0158037x.2021.1920383.

36. Reay T, Goodrick E, Waldorff SB, Casebeer A. Getting leopards to change their spots: co-creating a new professional role identity. *Acad Manag J.* 2017;60(3):1043-1070.
37. Fox B, Bearman M, Bellingham R, et al. Longing for connection: University educators creating meaning through sharing experiences of teaching online. *Br J Educ Technol.* 2021:1-16. doi: 10.1111/bjet.13113.
38. Sandars J, Patel R. The challenge of online learning for medical education during the COVID-19 pandemic. *Int J Med Educ.* 2020;11:169-170.
39. Fawns T. Postdigital education in design and practice. *Postdigital Sci Educ.* 2018;1(1):132-145.