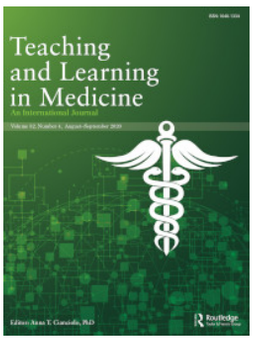

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GROUNDWORK

Developing a Novel 4-C Framework to Enhance Participation in Faculty Development

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ABSTRACT

Phenomenon: Universities offer a variety of voluntary faculty development to ensure quality education, but face inconsistent faculty participation. Therefore, all Dutch universities require all faculty to obtain a teaching qualification certificate. Yet, like other medical centers, University Medical Center Utrecht continued to struggle with faculty nonparticipation. It has been postulated that clinician teachers may face unique challenges with responsibilities for patient care in addition to teaching and research, challenges that cannot be overcome by merely mandating faculty development or a teaching certificate. This project was conducted to gain insight into factors that hinder faculty participation and better understand what is needed to enhance faculty engagement in their professional development as teachers. *Approach:* UMC Utrecht has had a teaching certificate requirement for over 20 years. In 2015-2016, we conducted a local needs assessment, gathering faculty perspectives about the teaching certification process. To convey seriousness of purpose and promote commitment to change, we formally engaged key stakeholders from the outset, obtained grant funding for the needs assessment, and had an outside consultant lead the project. Faculty who were stalled or never started were questioned via semi-structured interviews. A focus group with those actively in the process of obtaining their certificate discussed perceived challenges in the process and recommended solutions. Faculty who obtained their teaching certificate completed an anonymous evaluation form. All evaluation comments and transcripts were thematically analyzed using open and axial coding. A literature review was performed to contextualize our findings and identify potential solutions. We compared our initial themes to these findings and found key challenge/solution categories, which we subsequently developed into a novel framework. Findings from the study and literature review were organized using this framework and shared with different stakeholders, all of whom engaged in problem-solving. Ideas and potential solutions were incorporated into a final report with recommendations for improving faculty support and provided to the institutional leadership. *Findings:* Of 23 faculty teachers approached, 8 (34.8%) agreed to be interviewed; 7 of 25 (28.0%) participated in the focus group; and 83 of 156 (53.2%) completed the evaluation. From the transcripts and evaluation comments, three themes emerged related to context and barriers: (a) skill development versus certification; (b) workplace priorities and culture, and (c) visibility and feasibility of the teacher's role. Triangulation of these themes with the literature revealed four challenge/solution categories – *Competence, Context, Community,* and *Career*. This 4-C framework facilitated communication of findings, structured the development of an action plan in response to the findings, and assured implementation of new initiatives for faculty support beyond competence development. *Insights:* Simply adopting requirements for faculty development may be insufficient and even invoke resistance. Improving faculty participation in faculty development and the quality of education requires institutional attention to not just faculty *Competence* needs, but also the factors of *Context*, *Community*, and *Career* that together comprise the culture experienced by faculty teachers. With institutional buy-in and commitment to change, the 4-C framework can help focus institutional attention on existing gaps in all four domains and guide the development of comprehensive solutions.

KEYWORDS

Faculty development; university teaching qualification; support faculty teachers

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Introduction

Educational excellence and innovation require competent teachers. Universities offer a variety of voluntary faculty development programs to promote the teaching skills of their faculty.[1] These programs vary widely and, as others have observed, sometimes "those who need faculty development the most attend the least."[2 (p.42)] In an effort to address these concerns, several countries, including Germany, Norway, Sweden, Finland, Sri Lanka, Australia, and the United Kingdom (UK) have implemented or considered implementing requirements or guidelines for university teacher training.[3–6]

In the Netherlands all universities signed an agreement in 2008 to require a University Teaching Qualification certificate for new faculty teachers.[7] By 2012, every Dutch University, including its schools of medicine, had implemented required teacher development programs and adopted a competency-based portfolio approach.[8,9] At one Dutch university, Utrecht University, a mandatory teaching qualification for faculty teachers was implemented in 1996, predating the national effort by twelve years. Yet, despite the greater than two decade-long tradition of required faculty development via the mandatory teaching qualification certificate at Utrecht University, we find continuing resistance to obtaining the teaching qualification certificate among a significant number of established faculty teachers at the medical center.

It has been postulated that teaching faculty in medical centers may face unique challenges and tensions, having responsibilities not only for teaching and research but also patient care.[8] Teaching in particular may suffer from this combination of responsibilities,[10] as most medical schools and professional communities offer fewer rewards and incentives for education than for scientific research and patient care[11] and have poorly defined promotions criteria for advancement in education vs research pathways.[12] Additionally, mid- and late-career faculty may feel less urgency to become qualified, as they may feel they already have the necessary teaching skills and do not need certification for their career advancement[13] in a university culture that is perceived as generally valuing research over teaching.[14] This would suggest that merely implementing a requirement for faculty development may not solve the problem of poor attendance. We need not only to understand the context of our faculty teachers, but develop more comprehensive solutions that *actually address* the barriers they experience in attitude, work environment, and perceptions of culture. To do so, there must be institutional commitment and stakeholder buy-in and engagement.

To date, most studies on faculty development programs in health professions education pertain to participants in voluntary programs.[1,15] There are fewer studies about "required" faculty development programs in medicine and even less is known about non-participants.[2] The purpose of this article is to describe our efforts to better understand and address challenges with faculty nonparticipation in the required teaching qualification program. We present our needs assessment study designed to examine the problem, our review of the literature, and subsequent development of a novel framework for addressing the problem.

Methods

Design and context

This qualitative study/needs assessment was conducted between September 2015 and May 2016 using both retrospective and prospective data collected at University Medical Center (UMC) Utrecht in the Netherlands. We approached the study from a constructivist perspective, acknowledging that faculty teachers' experiences are socially produced. Analyses conducted within this framework focus not on individual motivations but on understanding the sociocultural contexts and conditions that enable these faculty teachers' experiences.[16] This study was approved by the Netherlands Association of Medical Education (NVMO) Ethical Review Board (application number 587) in September, 2017. We reviewed the literature throughout the study and developed the framework for organizing our data in the Summer of 2016. In this paper we use "faculty teachers" to refer to all faculty involved in university level teaching at UMC Utrecht (primarily clinical teachers but also including basic scientists and other educators).

All faculty teachers at UMC Utrecht are required to obtain a teaching qualification certificate. New faculty teachers must have their certificates within two years of their faculty appointment. Faculty teachers already appointed when the teaching qualification requirement was instituted also are expected to obtain a certificate. To obtain a teaching qualification certificate, faculty teachers must compile a teaching portfolio with evidence of (1) teaching experience (i.e. lecturing, small group teaching, and mentoring), (2) teaching skill acquisition (i.e. faculty development offerings attended), (3) actual teaching skill (i.e. adequate evaluations from students and peer or educational expert observers), and (4) reflective thinking about teaching in general and one's personal teaching skills. The criteria for quantity and quality of evidence

are set by Utrecht University and applied to all university faculty members, including those at the medical center.

The faculty development offerings cover multiple topics that vary in format from short workshops to intensive 3- to 5-day courses and are offered 2-4 times a year. Faculty teachers design their own pathway to certificate achievement based on their teaching experience and personal needs. On average, faculty teachers require 1-2 years to gain sufficient experience and skills and to complete the teaching portfolio. Submitted portfolios are reviewed by an educationalist in the teaching certificate program who provides detailed feedback, and after adjustment if needed, formally assessed by faculty teachers with advanced teaching qualifications. Since the program started in 1996, over 600 faculty teachers at UMC Utrecht have been awarded a teaching qualification certificate. Prior to 2016, there were no consequences for faculty teachers who had not yet obtained their certificates, resulting in a number of senior faculty teachers who never started the process. Due to "unqualified" senior faculty teachers and faculty turnover, it was estimated that roughly 20% of our faculty teachers from diverse departments at UMC Utrecht still needed to obtain a certificate at the time of our study.

Institutional engagement

Based on informal feedback from participants regarding challenges with the program and the number of non-participants, the faculty development unit decided to engage the Dean and Vice-Dean for Education to first examine the problem and, subsequently, to help implement needed changes. To emphasize its seriousness of purpose and commitment to improvement, the unit applied for an intramural grant to embark on a formal needs assessment study. Further formalizing the process, the unit engaged a visiting faculty member with experience in faculty development and educational scholarship (HCC) to 1) study local barriers to obtaining the teaching qualification certificate, 2) review the literature for context and potential solutions and ideas and 3) draft a set of recommendations for the institution to address the barriers.

Participants and procedures

All participants in the needs assessment study were faculty teachers at UMC Utrecht and included three different groups: those who were stalled or had never started the certification process (*inactive* group); those who were actively engaged in the process but had not yet obtained certification (*active* group); and those who had successfully obtained their certificates (*obtained* group).

Inactive group – Faculty teachers who were stalled or had never started the certificate program were identified by the director of the teaching certificate program (LvB) and the chair of the certificate awarding committee (OtC) with the assistance of the heads of UMC Utrecht departments. Inclusion criteria used were faculty teachers who 1) signed up four years or longer ago to obtain a teaching certificate, but had still not completed the process, or 2) those with longer than ten years of significant teaching experience (e.g. course leadership or other education leadership role) at UMC Utrecht and never signed up to obtain a certificate. Because this group was the primary focus of study, we decided to use one-on-one interviews to allow in-depth exploration of concerns and ensure robustness of data collected. Email invitations were sent to all 23 faculty teachers meeting these criteria, to participate in confidential one-on-one interviews.

Those who agreed to be confidentially interviewed were sent the interview questions in advance. They were asked to specify 1) reasons for not obtaining, or starting but not finishing the certification process, 2) the most important barriers to obtaining a certificate, 3) suggestions for overcoming these barriers, and 4) recommendations for how the certification process could be improved to assist faculty teachers in obtaining the certificate. All interviews were conducted in the English language by HCC. She was not part of the teaching certificate program and was not known to any of the study participants. University faculty in the Netherlands generally have mastery of the English language. The 20-40 minute interviews were audio-recorded. The audio files were transcribed verbatim by an external service and de-identified.

Active group – In the Fall of 2015, 25 faculty teachers were actively engaged in the certification process. To maximize participation and convenience, all were invited via email to a confidential hour-long focus group type session that was held in place of a regularly scheduled check-in meeting of the certification program. HCC facilitated the session. Participants who attended the session were divided into small groups and asked to first discuss and share with each other in Dutch 1) the challenges/difficulties they encountered, 2) tips on overcoming challenges, and 3) ideas on how the certification program could help. The groups were then asked to share and further discuss their challenges and ideas with the larger group, in English. Written notes of the discussion were taken

by HCC, aggregating comments to maintain confidentiality of the participants. HCC then drafted a summary report of the session including detailed discussion points.

Obtained group – All 156 faculty teachers who had obtained their certificates between January, 2012 and September, 2015 were asked to complete a routine anonymous online questionnaire about the teaching qualification program at the time of completion of the program. The online questionnaire included 16 questions. It asked faculty teachers to rate different program elements using a 5-point scale and included three text boxes for narrative comments: general comments, valued aspects of the program, and recommendations for improvement. We extracted these previously collected narrative comments for this study. These narrative comments were given by participants in Dutch and translated into English by HCC using Google Translate and then reviewed and confirmed by LvB.

We also performed a survey of the literature on faculty development in health professions education, using a hermeneutic approach.[17] This approach uses targeted searches to identify relevant publications and reading of the publications to provide the foundation for finding additional literature with a goal of understanding a particular phenomenon. An initial search identified a small number of highly relevant publications that led to iterative cycles of reading and identification of further search terms and literature. We focused primarily on literature published within the past 20 years, on topics of faculty development, teacher/educator competencies, educator careers, and identities, required faculty development/teaching qualification programs, and academies of medical educators. Information from the literature was used to provide context and aid in the understanding of the needs assessment findings as well as to help formulate potential solutions.

Data analysis

Consistent with our constructivist perspective, we used inductive thematic analysis to analyze our participant data. Thematic analysis allows for the systematic identification, organization, and analyses of the patterns; inductive thematic analysis allows themes to be developed empirically from, rather than imposed upon, the data.[16] First, LvB and HCC analyzed the interview transcripts from the *inactive* group using an iterative process. After familiarizing themselves with the transcripts, both investigators independently coded the first four transcripts to identify codes. They compared their coding lists, reconciled differences, and developed a codebook. They then independently applied this codebook to all remaining transcripts for open and axial coding. After meeting to discuss all transcripts and reconcile any discrepancies, they further abstracted, organized, and synthesized the themes. The final phases of analyses were discussed with and reviewed by the entire team. We did not discover new codes or themes despite additional interviews and the amount of data we gathered was sufficient to inform our understanding of the barriers to certification.[18]

HCC analyzed the notes from the focus group discussion with the *active* group. She first organized the detailed discussion points by subcategories within the two categories of challenges and suggestions and then created an abstracted summary that synthesized the results, key ideas, and themes. The report was then reviewed by the team in the context of the interview results and themes. No new themes emerged.

LvB and HCC then performed thematic analysis of all narrative comments submitted by the *obtained* group via the online questionnaire. Together, the two investigators reviewed all comments and grouped them into either positive or negative comments and suggestions. They then independently analyzed them using open coding to identify topic categories or codes, compared coding lists, reconciled differences, and developed a codebook. LvB applied these codes to all comments and generated frequency counts for each. LvB and HCC abstracted the codes to themes and compared these themes to those generated from the interview and focus group data. Again, no new themes were identified.

We used Dedoose Version 7.0.23 for the organization and analyses of our interview data, and Microsoft Word and Excel to organize and analyze the focus group and evaluation data.

Finally, we compared the themes from the needs assessment study to findings from the literature review, including a series of articles published by the Association of Professors of Medicine[19–22] and found key perspectives or domains of faculty teacher needs. We transformed these perspectives/domains into a novel framework that we subsequently used to organize all findings from the needs assessment and literature review. The findings were shared with the faculty development and education units, the education board, and faculty teachers at UMCU using the framework. Each group was engaged in further discussion, brainstorming, and group problem-solving to generate ideas for addressing challenges in each of the domains. The

generated ideas were then incorporated into a final 50-page report of findings and recommendations that was also structured according to the framework and provided to the institutional leadership.[23]

Reflexivity

LvB is the director of the teaching certificate program and fluent in Dutch and English. Her role afforded her insider status in relation to the teaching certificate program. At the same time, she is not a basic science or clinical teacher so she also occupies an outsider status in interpreting participant experiences. She deliberately did not take part in any of the interviews or discussion groups but used her insider/outsider status to both inform the team's understanding of the teaching qualification program and challenge assumptions.

HCC conducted all interviews and discussion groups, and performed the literature review. She was a visiting professor from the U.S. who is a clinician and professor in medical education with experience in faculty development. She did not speak Dutch, was not part of the teaching certificate program, and was not known to the study participants. She functioned primarily as an outsider to the teaching certificate program and the institutional culture. However, her experiences as a clinical teacher and in faculty development allowed her to have some insider understanding and appreciation of the participants' positions while avoiding an insider's influence on data collection.

OtC is chair of the certificate awarding committee and fluent in Dutch and English. As a professor of medical education somewhat removed from the day-to-day processes of the teaching certificate program, he functioned primarily as an outsider in the study. However, his insider status in the institution and involvement in the educational enterprises of the medical center allowed him to understand complexity and patterns in the data while providing additional perspectives.

Results

Of the faculty teachers approached, 9 of 23 in the *inactive group* agreed to be interviewed and we were able to schedule 8 (34.8%); 7 of 25 (28.0%) in the *active* group participated in the focus group, and 83 of 156 (53.2%) in the *obtained* group completed the evaluation.

From the interviews, we identified three themes related to barriers and context experienced with the certification process: 1) skill development versus qualification, 2) workplace priorities and culture, and 3) visibility and feasibility of the teaching role. These themes were confirmed when compared to the themes found in the focus group session and the narrative comments from the questionnaire.

Skill development versus qualification (all groups)

All participants agreed that faculty teaching medical students should be obligated to be qualified as teachers. However, the *inactive* group tended to challenge whether obtaining a teaching qualification certificate would actually help them to become better teachers. Most of them considered it an administrative requirement that primarily benefits the university. This perception of administrative burden was echoed by the *obtained* group, where the majority of their negative comments had to do with the time required for the process (32.3%) and the burden of putting together a detailed portfolio (28.3%). Participants would have preferred using the time spent on completing their portfolios on other activities that would improve their teaching skills.

> "It is a terrible amount of work … it takes many times more time than what it ultimately yields in insights; this discrepancy must be eliminated in order to motivate more [faculty] to obtain [the teaching qualification]" (Obtained-12.2015)

In all three groups, individuals enjoyed and valued the faculty development courses. Most (39.4%) of the positive comments from the *obtained* group pertained to appreciation of the courses. Despite complaints about the portfolio, a significant number of those in the *obtained* group did feel the written reflections and feedback on their portfolios were valuable for their learning (26.8% and 14.2% of positive comments respectively). All groups discussed the importance of the program's required observation and feedback by a peer or educational expert. However, to maximize personal development, the majority of participants suggested more flexible and individualized routes to obtaining a teaching certificate based on personal skill needs and experiences.

Workplace priorities and culture (inactive group only)

The *inactive* group participants described clinical work, research, and education as being equally valued and important in theory, but not in practice. They felt that departments prioritize clinical and research

activities, and view teaching only as an add-on activity to existing duties.

> "It would be nice to really feel that a teacher is as important as a good clinician as is a good researcher" (Inactive-2)

They also felt that not enough resources were being set aside for teaching, and that faculty teachers do not receive sufficient time to invest in teaching itself, let alone to obtain their teaching qualification certificates.

Participants noted that faculty are rewarded more for clinical and research activities than for educational activities, and that some leaders have not themselves obtained their teaching certificates. They suggested departments could demonstrate that they value education by having role models in leadership positions and by providing people with time to teach, obtain teaching certificates, and improve their teaching skills. Participants also recommended that instead of tacking teaching onto clinical and research duties, departments identify and support those who are particularly interested in teaching.

Visibility and feasibility of teaching community and role (all groups)

With regard to the workplace culture, all participants described a lack of clarity and visibility of the faculty teacher's role. They were sometimes unclear on the expectations and requirements regarding teaching and the teaching certification process, even among the *obtained* group. The *inactive* and *active* group participants discussed the lack of clear indicators of excellent performance in education. They acknowledged that part of the difficulty was the challenge of assessing performance. Some recommended the use of awards and prizes to increase visibility.

> "[Patient care] is what brings in the money. Research, you can assess objectively by performance in terms of output and in terms of getting grant money… But for teaching, it's much less clear and much more vague, and therefore, for somebody involved in teaching, it's more difficult to defend their time for teaching… "(Inactive-4)

This lack of visibility extended to the sense of a lack of community. Participants from the *active* and *inactive* groups described isolation from other teachers and few or no venues for sharing information. They perceived a lack of general information-sharing both among teachers across departments as well as among departmental leaders within the institution. This included sharing information on best practices for teaching as well as departmental strategies for supporting education.

The *inactive* group questioned the career prospects for people with significant involvement in and enjoyment of teaching. They asked for clearer career paths in education suggesting that this would motivate junior faculty teachers to more actively engage in the education mission.

> "Make the [teaching career] path more visible … allocate and provide names of those who are in this path … design a program for … what is needed for a full professor, we want every division to have at least one full professor in teaching." (Inactive-4)

Some did not feel it was possible to be promoted based on activities in education. They also expressed concern that faculty members who are promoted for their documented work in education are not teachers per se, but in fact researchers who do research and publish about education.

4-C framework

A summary of the literature review findings about challenges and potential solutions in faculty development has been previously published.[24] Triangulation of the themes from the needs assessment study with the literature review findings revealed four distinct domains of challenges/solutions – *Competence*, *Context*, *Community*, and *Career* – which we have named the 4C's of faculty development. *Competence* is the skills that faculty teachers need to meet their teaching responsibilities and support the institution's educational mission, and is the domain that faculty development has traditionally targeted. *Context* encompasses the resources faculty teachers need, such as adequate time, funding, staff support, and facilities, not just to perform their teaching duties but also pursue personal skill development and innovation. *Community* involves a community of practice for support, collaboration, mentoring, and identity formation, as well as for advocacy. Lastly, *Career* is for ensuring career viability of faculty teachers within academic institutions. This includes increasing visibility of a teacher's work through documentation and recognition of excellence and clear career pathways for teachers with opportunities and criteria for advancement.

Discussion

Faculty teachers in our study generally agreed that it was important for teachers to have appropriate skills and qualifications for teaching. Resistance to the

teaching certificate program was not caused by disinterest in improving skills, but rather because faculty teachers felt challenged by the effort and time required for certification. The key challenges faculty teachers faced were primarily ascribed to a workplace culture they perceived as valuing more the time and effort spent on tasks other than education (e.g. research, patient care). The *inactive* group, in particular, was concerned about the lack of time, resources, and rewards for teaching and questioned the viability of careers in education. All described a lack of community and role models.

These results are in accord with previous findings that 1) the challenges faculty teachers encounter with required faculty development programs primarily relate to the program or requirements *per se* rather than disinterest in teaching or lack of desire for improvement;[3,10,14] and 2) perceived workplace priorities and institutional culture can undermine both voluntary and compulsory faculty development efforts.[25] The non-participants in the teaching qualification program stood out for their concerns about the latter. Hafler warns about the power of this "hidden curriculum" (i.e. the cultural messages being transmitted by institutions) and lists elements that affect faculty member interpretations of what it means to be a good faculty member and what is needed for career advancement. These include the allocation of resources (space, time, salary), support from leadership, and promotion and tenure processes.[25]

While it would appear that the greatest concern among our faculty teachers was time investment, the real concern is time investment in the context of institutional value and rewards. When few resources are allocated to teaching or the teaching qualification program, when leaders themselves have not obtained the qualification certificate, and when no faculty teachers have been visibly promoted based on teaching, faculty teachers implicitly understand this to mean they should devote their time to research and patient care instead. In the case of required faculty development or teaching qualifications, inconsistencies in the structure and culture around teaching further intensifies the conflicting messages to faculty teachers. Our findings suggest that non-participants in faculty development programs are especially negatively influenced by these messages which serve as a main obstacle to their participation. Experiences in Norway and the UK substantiate the need to create an environment that is structurally and culturally supportive in order for required teaching qualification programs to achieve their goals.[3]

We were able to summarize our study findings in the context of the faculty development literature by using a novel 4-C framework which expands the focus of faculty development beyond the skills faculty teachers need (*Competence*), to emphasize the need for attention to the resources required (*Context*), potential isolation of faculty teachers (*Community*); and challenges to career advancement (*Career*).[24] This new 4-C Framework can be aligned with the four conditions of change outlined by Kirkpatrick and Kirkpatrick and applied to faculty development by Steinert. See Figure 1. In order to effect change, people must have 1) the desire to change, 2) the knowledge of what to do and how to do it, 3) a supportive environment, and 4) reward for changing, which can in turn impact the desire to change.[26,27] Steinert has argued that context is key for successful faculty development programs, yet faculty development programs only attempt to address desire and knowledge and lack attention to environment and reward.[27] Based on findings from our study and literature review, we agree and assert that leaving out any of the 4-C components in a broad faculty development program will undermine its effectiveness.

Use of the 4-C framework allowed us to emphasize to stakeholders the limited ability of faculty development programs and the need for institutional change in order to appropriately address the barriers faced by the faculty teachers at UMC Utrecht.[3,27] Since the Fall of 2016, UMCU has implemented change in each of the 4-C domains. Some examples include the creation of different courses and portfolio requirements for

<table>
<tr><th>The 4C-Framework for Teacher Support</th><th>Kirkpatrick's Conditions for Change</th><th>Steinert's Strategies</th></tr>
<tr><td></td><td>Desire</td><td rowspan="2">Faculty development</td></tr>
<tr><td>Competence (skills)</td><td>Knowledge</td></tr>
<tr><td>Context (resources)</td><td rowspan="2">Environment</td><td rowspan="3">Institutional change</td></tr>
<tr><td>Community</td></tr>
<tr><td>Career</td><td>Reward</td></tr>
</table>

Figure 1. Relationship between 4-C Framework, Kirkpatrick's Conditions for Change, and Steinert's proposed strategies.

experienced versus novice faculty teachers (*Competence*); implementation of an internal grants program to fund educational innovations (*Context*); founding of the *Harmen Tiddens Society for Distinguished Educators* as a community of practice and teaching academy (*Community*); and implementation of teaching awards, development of promotions criteria and academic pathways for faculty teachers, and creation of a novel, dedicated *associate professor of teaching* rank (*Career*).

Institutional stakeholders continue to refer to the study report and use the 4-C framework for ongoing review and development of improvement strategies. Initiatives currently in development include a funding structure to "buy-out" faculty teachers' time for participation in faculty/professional development activities. At the same time, target percentages of faculty teachers with teaching qualification certificates have been established for each department and departments are now held accountable for meeting these targets or risk losing university funding.

We believe that the key factors to our success in using our findings from the needs assessment study to drive change were the engagement of stakeholders throughout the process, use of the literature, and creation of the 4-C Framework. The Dean and Vice Dean for Education were involved from the outset and agreed to commit to improving faculty skill and career development. The multi-pronged qualitative approach to the needs assessment also meant that various groups of faculty teachers were engaged in the study and important in informing the institution's next steps. The positioning of our findings within the context of the broader literature enhanced its validity and acceptance to all stakeholders. Lastly, the 4-C lens of *Competence*, *Context*, *Community*, and *Career*, helped to focus stakeholder attention on issues beyond attainment of competence and pushed the institution to address the more difficult structural and cultural issues as well.

There are limitations to this study. It grew out of a local needs assessment, and was therefore a single institution study. Our findings may not be fully representative of faculty teacher experiences with teaching qualification certificates or other required faculty development programs. However, we included faculty teachers from various departments and at different stages of engagement with the certification process to ensure breadth of perspective and contextualized our findings within the results of a literature review. In addition, the development of the 4-C Framework was informed not only by findings from the institutions-specific needs assessment but also findings from a literature review that included studies of voluntary and required faculty development programs across multiple institutions and cultures.

Conclusion

Faculty development is a key strategy for ensuring academic excellence and innovation in education. For institutions struggling with faculty participation, the simple adoption of required faculty development may be insufficient. Required programs can be undermined by perceived administrative burdens of the process; yet mere facilitation of the process will not suffice to improve participation or teaching competence, especially in an environment of perceived low support and value for teaching. Successful faculty development requires institutional buy-in and attention to the institutional context and culture, faculty teachers' lived experiences, and the academic support of all faculty teachers. Framing faculty development using the 4-Cs of competence, context, community, and career, may help focus institutional attention on the solutions required in areas other than programing. In order to lead to real improvements, institutional stakeholders need to be engaged throughout the process of identifying and addressing local challenges and institutions must commit to creating environments that are both structurally and culturally supportive for faculty teachers.

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Declaration of interest statement

The authors report no conflicts of interest.

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