



Key Attributes of a Medical Learning Community Mentor at One Medical School

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Abstract

Purpose The purpose of this study was to discover the elements required for a successful learning community (LC) faculty member educator of medical students.

Method The authors in this qualitative study evaluated six 90-min focus groups of faculty members. The groups included 31 experienced and 19 inexperienced LC faculty members at the University of Texas Southwestern Medical School. After achieving excellent interrater reliability, transcriptions of the discussions were subjected to thematic analysis using ATLAS.ti software.

Results Five major themes emerged: (1) LC faculty characteristics/competency, (2) suggested faculty development methods, (3) factors outside the LC environment influencing student relationships, (4) student attributes influencing teaching techniques, and (5) measuring and improving history and physical skills. Faculty characteristics/competency subthemes included role-modeling, mentoring, and teaching competence. Suggested faculty development methods subthemes included assessing and giving feedback to faculty, peer development, and learning from experts. Experienced LC faculty focused more attention on teaching competence and mentoring competence than inexperienced LC faculty.

Discussion The themes with the most extensive discussion among the experienced LC faculty groups may represent qualities to be sought in future mentor recruitment and faculty development. Future studies could build on this study by similarly investigating student perceptions.

Keywords Learning community · Medical education mentoring · Mentoring traits · Mentor-student relationship

Introduction

The heart of medical education is the interaction between medical school faculty and students. Medical curricula are

shifting from large classroom teaching to active small group learning, such as flipped classrooms, case-based instruction, and team-based activities [1]. There is a growing interest in the roles and relationships inherent in these interactions between

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faculty and small groups of medical students [2]. In other fields, relationships between experienced professionals and students enhance personal professional development and career progression [3]. Studies of residency training programs [4, 5] confirm the importance of these mentoring initiatives. Within the context of medical education, prior research suggests this interaction supplements the traditional lecture-style format by offering advice, guiding professional growth, stimulating critical thought [6], managing work/life balance, and providing role models [7]. These interactions have led to desirable outcomes, such as increased numbers of publications and presentations by medical students. These interactions have also been beneficial to specific subgroups, leading to greater representation of underprivileged individuals [7].

One of the major responses to the growing demand for small group learning in medical education has been the introduction of learning communities (LCs), which are now present in over half of medical schools and being actively considered in many of the others [8–14]. LCs are defined as intentionally created groups, in which faculty present experiential learning opportunities with small groups of students [9]. These LCs differ from traditional classroom lectures in that learners are engaged in reciprocal interactions with their mentors, and enhanced student learning can be accomplished by adopting different teaching methods based on individual student needs [11, 15–18]. Student benefits in LC participation include leadership development, increased networking between faculty and students, and career guidance by faculty [15]. Research has found that faculty also realize benefits from participation in LCs, including improved communication skills, job satisfaction, productivity, and clinical skills [19, 20].

The role of the faculty in these relationships has been given various labels in the literature, such as mentor, coach, preceptor, and docent, as well as many others. Stoddard (2016) conceptualized the role of faculty in the medical context along two dimensions representing (1) the status of the faculty as either a member of the profession (intra-professional) or as an external expert (extra-professional) and (2) the educational purpose of the interaction [2]. He described and labeled eight distinct roles within these dimensions, listed in Table 1. Although Stoddard's (2016) conceptualization is useful in understanding dyadic interactions (between a faculty member and student), these relationships may manifest quite differently in small group settings where the faculty member is simultaneously engaged with multiple learners [2]. Given the emerging importance of these relationships to medical education, the paucity of research examining these roles in formalized small group interactions, such as in LCs, represents an important gap in knowledge [21, 22].

The purpose of this paper is to examine the roles identified by LC faculty in interactions with student learners. To begin to

investigate this relatively unexplored topic and facilitate the emergence of novel concepts and issues pertinent to this topic [1], focus groups of faculty were conducted in an LC at a large medical center to explore mentors' experience in leading small groups of medical students. Since the extent of LC teaching experience is variable with regard to insights and opinions about the successful characteristics of faculty, separate focus groups of experienced and inexperienced LC faculty were conducted.

Methods

In 2007, UT Southwestern School of Medicine created "The Academic Colleges" (colleges), an LC designed to enhance the school's educational mission. This LC consists of six colleges, each divided into six or seven faculty-led groups of six medical students from the same graduating class. The LC faculty mentor meets with the group throughout the 4 years of medical school and also has the option of teaching multiple groups from different graduating years. Each college is assigned a "master" who conducts faculty development and supervises the faculty leaders.

During the first 18 months, LC faculty members convene weekly sessions with their students in which histories and physical examinations are performed under the guidance of the faculty. As part of this learning process, students practice with standardized and real patients, receiving feedback from faculty and fellow students through interactive group discussion. These sessions also include discussions of ethics and professionalism in medicine, along with hospital visits, case-based learning, and social events to build camaraderie within the colleges group. After students start their clinical rotations, the frequency of the LC meetings is reduced to monthly and the purpose shifts to discussion of the students' clinical experiences on their clerkships.

A review of faculty and student evaluations of colleges from the last several years suggested that experienced and inexperienced LC faculty may have varying abilities for forming successful and beneficial relationships. To explore these varying abilities, we engaged 50 volunteers (76% participation rate) in six focus groups during a semi-annual retreat for the LC's faculty and masters in the summer of 2016. The UT Southwestern Institutional Review Board determined this research to be exempt from full review. We assigned three pairs of facilitators to conduct two focus groups per pair. For this study, participants were grouped as experienced ($n = 31$) or inexperienced ($n = 19$) based respectively on either having previous experience serving as LC faculty for a year or more or starting as an LC faculty in the upcoming academic year (2016–2017). This categorization allowed identification of the topics and themes that appeared to gain importance depending upon the participant's time in the LC.

Table 1 Roles of faculty in relationships with student learners [2]

Educational purpose of the interaction	Faculty status	
	Intra-profession	Extra-profession
Knowledge and/or skill transmission	Master/teacher/tutor	Facilitator
Professional identity formation	Guru/role model	Counselor
Navigating the institutional milieu	Advocate	Advisor
Relationship building	Mentor/buddy	Coach

Focus group data collection and analysis methods refined by members of this research team in several previous studies were used [23–31]. Facilitators were trained to use a nondirective approach to promote discussion. The facilitators gave an introduction to the groups on the purpose of the groups and provided broad instructions to elicit spontaneous discussion of members' thoughts, perceptions, feelings, responses, and concerns related to the following questions:

1. What are the essential, observable elements of an excellent LC faculty member?
2. When do you think these elements should be shared with or taught to new LC faculty members and experienced LC faculty members?
3. Should these elements be assessed in new and/or experienced LC faculty? If so, when and how often?

These questions were introduced at the beginning of the focus groups, and then each question was addressed sequentially. The groups lasted approximately 90 min and the discussions were audio recorded and transcribed for analysis.

Investigation of the qualitative data was conducted through inductive analysis of the transcribed text. One author (JW) first reviewed the transcripts to identify themes in the discussions and to provide preliminary definitions of these themes. The text was divided into discrete passages demarcated by change of speaker. To establish interrater reliability on coding of the passages, two independent raters (TG and WH) systematically and independently assigned thematic codes for each passage in the transcripts until adequate interrater reliability was obtained. During this process, these raters discussed and resolved their differences in assigned codes, refining the definitions of the themes. One additional theme was identified during this stage, and subthemes were established. These two raters achieved excellent interrater reliability [32] with a mean kappa value of .93 and kappa values for individual categories ranging from 0.85 to 1.00. ATLAS.ti software (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany) was used to code the passages and then the qualitative content of each theme and subtheme for representative passages was explored. The discussion topics were compared across groups by inspection and interpretation of the content across themes.

Numbers of passages represented in themes and subthemes, summaries of the content of the focus group discussions, and quotes selected as particularly illustrative of the content within themes and subthemes are presented.

Results

Seven broad content themes were identified in the focus group discussions: (1) LC faculty characteristics/competency, (2) suggested faculty development methods, (3) factors outside the LC environment influencing student relationships, (4) student attributes influencing teaching techniques, (5) measuring and improving history and physical (H&P) skills, (6) accessibility to students, and (7) small group facilitation skills. However, two of these themes, accessibility to students and small group facilitation skills, accounted for less than 5% of coded material and were excluded from further consideration, leaving a total of five themes for analysis. Table 2 lists definitions of the five major themes with exclusion criteria for the material coded within them.

Table 3 provides the numbers and proportions of passages coded into the themes and subthemes separately for groups of inexperienced and experienced mentors. Subtheme passage numbers and proportions within themes are shown in shaded rows in Table 3.

Theme 1. LC Faculty Characteristics/Competency

Theme 1, the most richly developed theme, was LC faculty characteristics/competency, representing more than one-fourth of all coded passages. Material in this theme included descriptions of the level of teaching ability, personal attributes, and faculty clinical experience. The three subthemes, role-modeling, mentoring, and teaching competence, represent different developer-learner interactions [2], as described in detail below.

1a. Role-modeling competence. Experienced and inexperienced LC faculty members discussed role-modeling competence equally in terms of proportions of numbers of passages and similarity of content. Both groups

Table 2 Themes, their definitions, and exclusion rules were identified in focus group discussions on the key attributes of an exceptional colleges LC faculty member

Theme	Definition	Exclusion rules
LC faculty characteristics/competency	Faculty member characteristics, including those both good and needing improvement.	
Suggested faculty development methods	Identifying and publicizing successful mentoring methods, including peer feedback and assessments by masters	Excludes student evaluation forms and mentors stating best practices.
Factors outside the LC environment influencing student relationship	Extracurricular factors, including mental health, physical health, academic support, and additional resources	
Student attributes influencing teaching techniques	Faculty member adjusting the schedule and/or curriculum to meet the needs of individual learners or the entire group.	
Measuring and improving H&P skills	Students' (and rarely faculty members') H&P examination skills	

described role-modeling competence as proficiency in patient encounter skills such as taking a history and performing a physical examination, as well as adept clinical reasoning and interpersonal skills in patient interactions.

You also have to be good at taking a good history yourself; you can't teach somebody if you can't do that as well.

The competence of the mentor to really discuss complex patients or to perform physical exam maneuvers.

They ought to be competent. That is, if he has got to teach about CBLs [Case-Based Learning sessions], he ought to know the basic elements of being interested and teaching about complicated medical patients.

What we are doing is skill building here...The physical examination skills that we teach, you should be able to do that at a high level...you should be able to demonstrate whatever cardiac exam we want people to...learn at least in the first year.

Being professional and ethical...one needs to be aware of the myriad of social challenges, whether it's LGBT [Lesbian, Gay, Bisexual, and Transgender] or end-of-life care...each mentor needs to have some breadth of experience, or skill, or ability to feel comfortable in leading those discussions, as well as the physical exam.

1b. Mentoring competence. The second most frequently discussed subtheme of LC faculty characteristics/competency was mentoring competence. LC faculty

Table 3 Numbers and proportions of passages represented in themes and subthemes

Theme/subtheme	Experienced LC faculty		Inexperienced LC faculty		Total	
	<i>n</i> *	Column %	<i>n</i> *	Column %	<i>n</i> *	Column %
1. LC faculty characteristics/competency	230	27%	106	32%	336	28%
1.a. Role model competence	23	10%	8	8%	31	9%
1.b. Mentoring competence	72	31%	14	13%	86	26%
1.c. Teaching competence	130	57%	19	18%	149	44%
2. Suggested faculty development methods	200	23%	79	24%	279	24%
2.a. Assessing and giving feedback	54	27%	27	34%	81	29%
2.b. Peer development	58	29%	14	18%	72	26%
2.c. Learning from experts	24	12%	7	9%	31	11%
3. Factors outside the LC environment influencing student relationship	119	14%	56	17%	175	15%
4. Student attributes influencing teaching techniques	96	11%	33	10%	129	11%
5. Measuring and improving H&P skills	90	11%	20	6%	110	9%
Total	852	100%	330	100%	1182	100%

**n* represents the number of passages (quotes) that characterized a theme; some passages characterized more than one theme and some passages did not characterize any of the identified themes

members described this competence as caring equally for the well-being and the personal and professional growth of the mentees, being prepared for the sessions, understanding the context in which students are learning, going above and beyond defined expectations, and talking and listening during open conversations with mentees. Experienced LC faculty had almost three times more passages than inexperienced faculty members coded in this subtheme (see Table 3). Inexperienced LC faculty had a greater number of passages discussing more general traits of successful mentors, whereas experienced faculty had more passages actually describing the means by which these traits could be acquired.

They need to care about the group. They need to care about each individual person and their growth as a person and professional equally.

Caring for your mentees, caring for their wellbeing.

You can talk to them. Sometimes they may not be able to share certain things about their growth. So having a group, having 1-on-1 sessions.... How med school and things or how they're doing, I think that helps them a lot. And they open up a lot more, and you'll be surprised at what you hear during those sessions.

But I think that's something very important for excellence...one thing your mentor did that was out of the ordinary. Above and beyond.

Emotional inclusion...being in tune and detect what is going on in people.

It's helpful...to know when is the next big stressor coming up for the students.

Caring would be coming prepared for the lecture or for the section, that you care enough to come prepared because you care enough for your mentees. So I think that's one way of showing your caring.

1c. Teaching competence. The LC faculty characteristic subtheme with the most coded passages was teaching competence, comprising almost half of the passages coded in theme 1. The LC faculty members described teaching competence as being able to engage a group, lead a small group discussion, and remain sensitive and responsive to individual student needs. Importantly, teaching was conceptualized at the level of the group as well as focusing on the individuals within the group. Experienced LC faculty had three times more passages coded in this subtheme than inexperienced faculty (see Table 3). Experienced LC

faculty described aspects of understanding the scope of their mentoring goals, recognizing their limitations, and seeking guidance when beyond one's limitations. Inexperienced LC faculty members focused on role-modeling for mentees and the various teaching competencies of excellent mentors.

Be able to recognize your limitations.

See what area I need to learn.

Facilitate a good group discussion amongst the students, it's a key thing especially for a lot of ethics modules.

Should be able to give informative feedback in a professional way.

For communication, I think this is key for an effective college mentor...they bring everybody to the discussion.

Recognize students who are lagging and figure out ways to bring them up to speed.

Get out of the way of the good students and gravitate towards students who are having a little trouble, who need a little more help.

To be able to bring students from disparate backgrounds, goals and life, and to work together in a consistent and efficient way.

Theme 2. Suggested Faculty Development Methods

The second theme, suggested faculty development methods, had the second highest number of coded passages, encompassing almost one-fourth of all the passages from the focus groups. Experienced and inexperienced faculty groups provided equivalent percentages of coded passages in this theme. Three subthemes addressed the instructional methods that faculty identified as important and desired to develop increased teaching competence, as described in detail below.

- *2a. Assessing and giving feedback.* The suggested faculty development methods subtheme with the most coded passages was assessing and giving feedback, arising in almost one-third of the passages of theme 2. This subtheme indicated the desired source of faculty development to be from an objective measurement of their performance against a standard. The inexperienced LC faculty had the most passages in this subtheme, and slightly more than the experienced LC faculty members (see Table 3). The assessing and giving feedback subtheme reflected the LC faculty's desire for formative feedback, including receiving regularly structured evaluations to facilitate continuous

improvement of their mentoring abilities. Concern was also expressed that feedback from students might constitute a popularity contest rather than assessment of actual mentor competence.

[LC Faculty] should be assessed...the more feedback the better ...You get feedback and you want to improve. I'm looking at these forms and I'm seeing definite room for improvement, and I would've liked to have had more feedback.

Many of these skills are skills that you continue to need to learn over time. Definitely if I walk in and I'm expected to be a mentor, the question is, what do my students expect of me? What are the skills that I'm expected to bring to the table? And whatever those expectations are, clearly I don't come supplied with every one of them. You have to teach me. The ones that I'm lacking in and the ones I can improve on. And hone them as time goes by. You probably need initial and then you probably need continuing education.

New mentors and experienced mentors ought to be assessed. I'm struggling with the concept that in some ways their assessments by persons might cater to something that weakens the program. In the sense that the mentors say I will do that which is popular ... I think it's a good idea to be assessed and I think it's a good idea to improve one's educational capacity by being assessed, but I don't want to necessarily have to cater to the group in order to get a good grade.

- *2b. Peer development.* The peer development subtheme had almost as many coded passages as the assessing and giving feedback subtheme. This subtheme indicated the desired source of faculty development to be from peers within their academic community by sharing best practices. It had more coded passages from experienced than from inexperienced mentors (see Table 3). Mentors described peer development as a system that would allow the LC faculty to learn best mentoring practices from one another. This would provide LC faculty members, either in pairs or in groups, an opportunity to share their experiences, observations, and strengths for mutual improvement.

Pair yourself up, but it might be good to observe a couple of different experienced [LC faculty] so you can get

a flavor for what they do....Not everybody's the same way, not everybody teaches the same way.

Have a buddy..., and so you could have a more experienced person with a new person or different specialties and they would also determine excellent [LC faculty]... feeling like they got feedback or they got help from that other person.

Observe somebody and then have that person observe us and tell us what we are doing right and wrong.

Having a huddle early on...for the new [LC faculty] so that they could talk about the first two or three sessions would be very helpful.

We have some great strengths in the colleges, but I don't know that we share them as well as we should...it would help all [LC faculty] ... if we could identify...what are best practices of teaching things.

- *2c. Learning from experts.* Learning from experts was the subtheme with the fewest coded passages for both experienced and inexperienced LC faculty members. This subtheme indicated the desired source of faculty development to be through experiential learning from experts outside of their community, both medical or educational specialists. Faculty described learning from experts as arranging to have someone proficient in a particular subject, such as a component of the physical exam or teaching skill, to instruct them so that they are better equipped to pass that information on to their students.

It'd be great if we were taught some of these theories, so we understand what to do when we stumble and fall and can't quite figure out where we messed up. What are the steps? Where do we start? Where are the theoretical bases of what we are going to do next?

If you're going to teach the neuro exam today, here's some key points to focus in on...recruit [an expert] to come in and go over it with them.

Being paired with someone who's a master at it and getting to watch it is the most powerful thing.

Theme 3. Factors Outside the LC Environment Influencing Student Relationship

Several factors external to the LC environment were identified by LC faculty as being important influences on the developer-learner relationship. This theme was mentioned in less than one-fifth of the passages, with equal numbers of coded passages from experienced and inexperienced LC faculty

members (see Table 3). Topics included in this theme were personal health and wellness, academic performance, and need for additional support. Specific examples provided within this theme were poor performance on tests in other courses, poor health, inattention to wellness, life hardships, and emotional needs.

Make sure that everybody was feeling healthy. A couple students felt like they couldn't go to Student Health.

Does the student feel the mentor was a role model for wellness?

They can come to my office if they need to talk about [how] they didn't do well on a test.

So [with] one student who struggled all year [I have] had a lot of different meetings with her individually, but my other students would [think] I was crazy if I was meeting with them as often as I was meeting with her, but she had a very different set of needs...a lot of handholding.

Theme 4. Student Attributes Influencing Teaching Techniques

The LC faculty members identified several student attributes, such as differing student personalities from year to year, diverse student backgrounds and skill levels in one group, and generational gaps between them and mentees, which influence the teaching strategies they might choose to use. The topics in this theme were discussed in just over one-tenth of the passages. Although the discussions of more and less experienced LC faculty members in this theme had an equal numbers of passages, the material in this theme discussed by experienced LC faculty members had more detail than the discussion of inexperienced faculty members, and the experienced LC members generalized from their specific personal experiences.

You get different personalities. If this was something that was a slam dunk one year that next year isn't... going to work...I need a different approach.

Being able to gauge...all the different levels that your learners are at.

Noticing how to adjust to different students because all your students are going to be different. Some of them are not going to respond to what this other student is. You have to be able to recognize it and reach out to that particular student, this particular student.

A good [LC Faculty] has to be able to...engage all members of the group despite their different personalities to...come together in a learning environment.

Recognize students who are lagging and figure out ways to bring them up to speed.

The intergenerational thing of dealing with millennials and how they handle conflict...and what their goals

are...how it's different from...other generations...negotiating that was a big part of what we spent time on.

How do you communicate to them...there is like a gap sometimes...the way I would say or do it could be completely different from how they're going to approach it...so those elements or skills should be taught too.

Theme 5. Measuring and Improving H&P Skills

The ability to perform and teach the physical examination was viewed as important by LC faculty, both inexperienced and experienced. Given the lack of time that medical students may have towards honing their exam skills during clinical rotations, LC faculty members play a vital role in demonstrating these skills [33]. This theme was discussed in approximately one-tenth of passages.

Some ... [LC Faculty] don't carry a stethoscope or they never do a neurologic exam ... So it might be something...they really need to go over, something a little more basic.

The physical examination skills that we teach, you should be able to do that at a high level.

The competence of the [LC Faculty] to...perform physical exam maneuvers.

We should do some sort of formative OSCE [Objective Structured Clinical Examination] for [LC faculty] on the physical exam, since we've said that's a core of skill that the mentor should have.

Demonstrate the methodology, in performing, whether that is the history, physical exam, the assessment from H&P, to the plan. It's the method we are trying to teach them.

Discussion

The purpose of this investigation was to examine the roles identified by LC faculty in interactions with student learners. From this series of focus groups, five definitive themes emerged. The five themes consist of (1) LC faculty characteristics/competency, (2) suggested faculty development methods, (3) factors outside the LC environment influencing student relationship, (4) student attributes influencing teaching techniques, and (5) measuring and improving history and physical skills. These five themes can be collapsed into three areas of discussion: key areas of competence essential for a LC faculty member, instructional strategies to increase teaching competence, and contextualizing the instruction based on factors external to the faculty.

The first area of discussion involves competencies of LC faculty (theme 1), which was the most frequent focus of discussion, accounting for 28% of the passages coded. Three main areas were identified: role-modeling competence, mentoring competence, and teaching competence. Focus group participants generally viewed successful LC faculty as displaying competence in all three areas. Role-modeling competence was generally identified as demonstrating medical professional behavior and pedagogically was included in the discussions of ethics and professional behavior. Mentoring competence was discussed in the context of the interpersonal relationship between the faculty and student learners, and was generally described using the term “mentor.” Teaching competence was primarily instructional in nature, aligning with the need to promote specific medical educational outcomes in the history and physical examination. The discussions also included the use of specific instructional strategies, such as standardized patients and simulations.

All these competencies aligned well with conceptual frameworks on mentoring and teaching [34, 35], as outlined in Table 4. This table illustrates the general conceptual framework of relationships in other domains, such as management, engineering, and business. Even though the current study aligns well with existing mentoring frameworks in other fields, it adds a dimension directly pertinent to the medical context (also shown in Table 4): teaching competence. This competence aligns with what Shulman (1986) calls “Pedagogical Content Knowledge,” [34] which Irby (2014) recently applied to clinical teaching in medical education [36]. In other words, this paper offers evidence supporting the existence of pedagogical content knowledge.

The three subthemes of theme 1 also highlight the differences between experienced and inexperienced LC faculty responses. Experienced LC faculty members discussed teaching and mentoring competence more extensively than did inexperienced faculty. Thus, the value of teaching competence was realized as LC faculty members gained more experience in their mentoring role. This shows the recognition that the mentor needs to also be a teacher and possess an awareness that teaching needs to be linked to the level of student development.

The second area of discussion revolves around instructional strategies to increase teaching competence. The LC faculty suggested pairing inexperienced with experienced mentors, so that inexperienced mentors could observe an expert and then be observed by an expert. In addition, LC faculty suggested inviting outside experts to faculty development sessions. These suggestions could guide future LC faculty onboarding and development, and future assessments of medical school mentors could focus on these sub-themes for constructive feedback.

LC faculty discussed how they had to adjust their teaching style for specific students (theme 4) and to teach the H&P examination (theme 5), further reflecting the added dimension of teaching competence from the first thread of discussion. As medical school education evolves from lecture-based to more small group-based, faculty can no longer take the “one size fits all” approach to teaching. This educational evolution has highlighted to medical educators the importance of individualizing feedback and identifying strengths and weaknesses of specific students.

The third area of discussion addresses contextualizing student instruction based on factors external to the faculty (theme 3). LC faculty recognized that within LCs, assisting students who deal with a range of issues, including mental distress, emotional needs, and maintaining healthy relationships, is an important component of the LC faculty’s duty to shepherd students along the pathway to being a physician. This component is absent in the traditional classroom model of medical education, in which faculty cannot simultaneously adjust the material based on individual students’ needs. This finding is consistent with prior research showing that a lack of longitudinal faculty-learner relationships, fragmented learning, and social isolation are associated with burnout and depression among medical students (Bicket et al. 2010). In other words, by providing students with individualized instruction that toughens them against external stressors, students should be able to better focus on building their clinical skills and becoming better clinicians in the long run.

This study had several limitations. Although it is important to ascertain essential competencies from the LC faculty members themselves, the study addressed neither the learner perspective of essential developer qualities nor concrete

Table 4 Relationships between conceptual frameworks of faculty roles in 3 models

Domain	Model		
	General mentoring model [3]	Pedagogical content knowledge model [34]	Learning community model
Professional	Career functions	Knowledge of content	Role model competence
Interpersonal	Psychosocial functions	Knowledge of learners	Mentoring competence
Educational		Knowledge of pedagogy and context	Teaching competence

outcomes of these relationships. This study was limited to a single learning institution and to only a subgroup of the total population of LC faculty. This study's methods were able to capture only the themes and subthemes that the LC faculty introduced. There may be other themes of importance that would be raised in a focus group consisting of medical students. To address this limitation, a future focus group study involving medical students is planned.

Furthermore, it is unclear if the suggested characteristics of an effective LC faculty member are related to the LC environment itself, or if they are simply attributes that underpin effective clinical instruction more broadly. However, the longitudinal nature and small group setting of the LC support specific subthemes that were discussed, such as role model and mentoring competence. Although this study's sample of LC faculty is not necessarily representative, the emergence of themes that align with and extend the literature suggests validity of the findings.

The findings from the current study provide clear direction for future research and program development. Conducting focus groups with students currently participating in LC communities may yield additional insights into the mentoring process. Similarly, asking former students to reflect on how the LC has informed their further education and clinical practice may help understand the long-term utility of the LC process. This study could also be replicated in other settings and within other academic disciplines. Another promising avenue of research involves assessing at what point in time an LC faculty member starts to change his or her perspectives on mentoring. While this study classified any LC member with at least 1 year of mentoring as experienced, a mentor's shift in views may become more pronounced after serving in the LC for several years.

Establishing the effectiveness of the LC model in promoting educational and patient care outcomes would also be an important next step. Given the growth of LCs in medical education, the findings of this study could serve as an initial step for a manual of operating procedures for successful LCs, in which descriptions of ideal LC faculty member characteristics could be listed.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval This study was deemed exempt from review by the UT Southwestern Medical School Institutional Review Board on 5/25/2016 (STU 052016-028).

Disclaimers None.

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