

Clinical Teacher Identity as Told by Early Mid-Career Clinical Dental Instructors

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Submitted in partial fulfillment of the
Requirements for the degree of
Doctor of Philosophy
Under the Executive Committee
Of the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2024

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Abstract

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Little is known about the nature of clinical teacher identity among clinical dental instructors. In broader education research, teacher identity is recognized as a central organizing element in the life of a teacher and a source of motivation to persist in teaching and become better at it. The awareness of and research into clinical teacher identity in health professions education is also increasing, although there is little identity scholarship in dentistry or dental academia. This qualitative study sought to explore how early mid-career clinical dental instructors make sense of themselves as teachers. Five early mid-career clinical dental instructors participated in a series of semi-structured interviews about clinical teaching. Additionally, eight former and current dental students of these educators participated in a series of focus groups to provide an external perspective on faculty members' experiences. Re-interpretation of interviews with educators and conversations with their students revealed that educators' identities were complex, fluid, and influenced by various social, contextual, and emotional dimensions. The findings of the study suggest potential directions for strengthening the pathways of entry into dental academia and retention of early mid-career dental faculty.

Keywords: dental education, clinical educator identity, teacher identity, professional development

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Acknowledgements

First and foremost, I want to express my deepest gratitude to Professor Felicia Moore Mensah. Thank you for challenging and encouraging me, and for supporting me throughout my doctoral journey. I am grateful for your wisdom, discernment, and grace. Your mentorship is a blessing.

To my dissertation committee members - Professor Felicia Moore Mensah, Professor Ann Rivet, Professor Anna Neumann, Dr. Letty Moss-Salentijn, Dr. Laureen Zubiaurre Bitzer, and Dr. Roseanna Graham - thank you for your insightful advice and guidance! Your example inspires me to be a better scholar. I extend my sincerest appreciation to Dr. O. Roger Anderson and Dr. Marlene Klyvert, who have been instrumental in my education journey.

To the participant educators and students, thank you for helping me bring this study to life. To colleagues and friends in New York, Victoria, Cleveland, Dallas, Salt Lake City, and beyond: thank you for your unwavering encouragement. To my parents and my siblings: thank you for believing in me. To Chris: you are my rock.

Chapter 1: Introduction

My interest in clinical educator identity stems from my recent experience as a dental student. Clinical teaching in dentistry is a unique endeavor: the intimate setting of a person's mouth and the fast-paced environment — the allotted appointment times are limited, and the anesthesia only lasts a short time — mean that the teaching is usually one-on-one. The teacher has to simultaneously, and often extemporaneously, attend to the needs of the patient and the needs of the students, whose priorities are at times orthogonal. Students, consciously or not, flock to some faculty and not others, and the decisions seem to be based on more than the faculty's proficiency and expertise alone. Studies in dental education explore the educators' (e.g., Chambers et al., 2004; Maart & Gordon, 2018) and students' (e.g., Jahangiri et al., 2013; Schonwetter et al., 2006) perspectives on the qualities and qualifications of effective clinical teachers. In recent years, training programs focusing on the fundamentals and best practices in clinical teaching emerged, catering to dental and dental hygiene educators more broadly (e.g., University of Minnesota School of Dentistry [UMN], 2023) or specifically to faculty members transitioning from practice into teaching (e.g., University of Pennsylvania School of Dental Medicine [UPenn], 2023). Most such programs focus on “knowledge and skills necessary to be an effective educator” (UMN, 2023). Less attention is given, however, to how faculty articulate what it means to be a clinical dental educator and who they are as such.

There is an increasing appreciation for the central organizing role of teacher identity in a teacher's life. Identifying as a teacher was shown to provide meaning, motivation, persistence, and resilience (Beauchamp & Thomas, 2009; Beijaard et al., 2004), and positively correlated with the quality of classroom teaching (Agee, 2004). Healthcare education, too, is beginning to recognize the importance of a strong educator identity for faculty productivity, career

satisfaction, and perseverance and joy (Cantillon et al., 2019; Triemstra et al., 2021).

There is a firm belief that identity needs to be addressed more effectively and explicitly as a component of teacher education; and that it is one of the responsibilities of teacher development programs to provide a space for teachers' identity (re)interpretation (e.g., Beauchamp & Thomas, 2009; Olsen, 2014). Healthcare education researchers suggest that faculty members should embrace their identities as teachers and be supported in doing so by their environments and through faculty development (Browne et al., 2018; Steinert et al., 2019) and that the success of future faculty development initiatives for clinical teachers depends on developing an understanding of what shapes and influences clinical teacher identity (Cantillon et al., 2019; Leslie, 2014).

The majority of studies attempting to characterize clinical educator identity and factors influential to its development were carried out in the contexts of medicine and nursing (see Cantillon et al. (2019) for a scoping review of research on clinical teacher identity published before 2017; 50% of the studies fell under the discipline of medicine, followed by 35% in nursing). Dentistry is a distinct discipline with its own standards and practices of care, governing bodies, and educational systems (American Dental Education Association [ADEA], 2023b). Unlike medicine, where postdoctoral training is (1) required to practice and (2) almost invariably includes teaching responsibilities (Accreditation Council for Graduate Medical Education [ACGME], 2022), less than 40% of graduating dental school seniors seek additional postdoctoral education (ADEA, 2023b). Given the scarcity of research into the processes of sense-making around becoming and being clinical educators in dentistry, it is important to seek insight into how dental educators make meaning of themselves as clinical teachers, and how this meaning can be leveraged in supporting them in their teaching role so that they are content, committed to

it, and want to improve.

Background and Definitions

ADEA currently recognizes 81 dental schools in the United States and Canada. Of the 71 schools in the United States, 41 are public, 27 are private, and 3 identify as private state-related institutions (American Dental Association [ADA], 2023b; ADEA, 2023b). Most dental school curricula in the United States and Canada follow a similar general structure. A traditional curriculum spans four years, where the first and second years are dedicated to didactic and preclinical instruction, and the third and fourth years are predominantly clinic-based. In the first two years, education's primary focus is acquiring knowledge in basic biological and medical sciences, usually in a classroom or lecture setting, and developing manual procedural skills through simulation of models of the mouth and teeth. The clinical years of the dental school curriculum are dedicated to clinical instruction and experiences. Dental students in their clinical years are responsible for patient management and dental treatment planning and care for their patients in teaching clinics under the supervision of dental instructors. Clinical dental education largely takes an apprenticeship model of learning. As the students progress through their clinical education, they are expected to become increasingly more independent in diagnosis and procedural care, while the role of the instructors shifts from demonstration and hands-on guidance to increasingly hands-off corrective feedback. Aside from refining psychomotor and diagnostic skills, the students are expected to develop competence in effective provider-patient communication. Both components depend on effective role modeling by clinical instructors (Jahangiri et al., 2013; Victoroff & Hogan, 2006). Simultaneously attending to the needs of patients and students within the confined space in which dental care happens and the limited timeframe of dental appointments requires the ability to foster teaching moments while providing

the highest possible quality of healthcare to the patient in the dental chair.

Clinical dental instructors provide hands-on instruction and support to dental students in clinical settings. They typically have a doctoral degree in dentistry, as well as additional post-doctoral training and experience in clinical practice. Some instructors have additional specialty qualifications in different disciplines of dentistry, most commonly endodontics, periodontics, or prosthodontics. Specialists typically limit their teaching to procedures and encounters falling within the scope of the specialty and do not provide general dentistry supervision.

Most dental school faculty enter academia from private practice or private sector employment (ADEA, 2023b). Just over half of all U.S. dental faculty work in academia part-time. Although the overall number of female faculty has increased in the past decade, the number of male faculty is still almost twice that (ADEA, 2022). Most male faculty are age 60 or older, while most female faculty are between 40 and 59. In the 20 to 39 age group, the number of full- and part-time female faculty in the 20 to 39 age group is more than double that of male faculty (ADEA, 2023b).

In addition to clinical supervision of students, as they provide dental care to patients, the duties of a clinical instructor include instruction on dental procedures and techniques and assessment of students' skills and progress. Some instructors may engage in classroom teaching, administrative work, curriculum development and implementation, and research in addition to teaching in clinical settings (ADEA, 2023b).

There is a consistent shortage of clinical dental educators (ADEA, 2023b). Faculty leave dental academia to transition into private practice or retirement, and many programs are facing multiple upcoming vacancies (ADEA, 2023b; Horvath et al., 2016; Schenkein & Best, 2001; Wanchek et al., 2016). The shortage of dental faculty is a complex problem with no easy

solutions. However, a strong teacher identity may be one of the factors that could attract and retain dental faculty through increasing their motivation to teach, instilling and fostering confidence in their teaching abilities, and promoting resilience and adaptability to change.

Purpose and Context of This Study

For this study, I focused on a sub-group of clinical dental educators who have taught for over 3 years upon completion of training and are under 50 years old. I refer to these teachers as “early mid-career.” I focused on this age group for a couple of reasons. First, the age limitation -- under 50 -- allowed me to differentiate these educators from those who have followed the historically prevalent trajectory of “retiring” into teaching (ADEA, 2023b). Because these “early mid-career” instructors entered academia almost as soon as they entered practice, despite the widening pay gap between academia and private practice (Wilson et al., 2019), I conjectured that they could have a more prominent teaching identity or provide insight into deciding to pursue teaching in favor of practice.

Second, the years-of-experience limitation would allow me to focus on those who, by not falling in the category of “early career” (under 3-5 years of teaching experience in teacher education (e.g., Fox et al., 2015; Schaefer et al., 2021); under 3-5 years of teaching experience upon completion of training in dental education (ADA, 2023a; ADEA, 2023a)), receive less focused attention in dental faculty development efforts (ADA, 2023a; ADEA, 2023a) but at the same time have demonstrated commitment to the career, have established relationships and practices related to their teaching role.

Research Questions

A more nuanced understanding of clinical dental educator identity can inform faculty development efforts for existing dental educators, supporting retention and quality of instruction,

and strengthening the pathways of entry into dental academia. In this study, I sought to gain insight into the nature of clinical dental instructor identity by asking the following overarching research question:

How do early mid-career clinical dental instructors at a private urban dental school make sense of themselves as teachers?

In particular, the sub-questions are:

1. What factors emerge from their stories about teaching as influential in shaping how they make sense of themselves as teachers?
2. How do they make sense of where they are and where they are going as educators?

Structure of the Dissertation

Following this introductory chapter that touches on the foundations of this study and the personal experiences that led to it, I present the literature review in Chapter 2, where I explore such topics as faculty development and needs in healthcare, conceptualizations of teacher identity in broader education and healthcare education specifically, and the influences and outcomes of teacher identity. There, I also present Symbolic Interactionism and Identity Theory, which my study is grounded in theoretically.

In Chapter 3, I discuss my methodological approach to the design and completion of this qualitative, interview-driven narrative study, and first introduce the five early mid-career instructors: Drs. Blossom, Foxglove, Kalmia, Linden, and Ivy (pseudonyms). In Chapters 4 through 8, I retell the educators' stories, staying true to their own words. Chapter 9 discusses some of the cross-cutting themes that emerge from educators' stories, and introduces former and current dental students, who offer their perspectives on the clinical dental educators' clinical teaching.

Chapter 10, finally, concludes this dissertation with discussions aimed at highlighting the significance of my findings, implications for practice, and the limitations of my research. I also discuss future directions for research inspired by this study.

Chapter 2: Literature Review

I begin this chapter by reviewing the needs of dental faculty and faculty in the healthcare professions more broadly, and the state of faculty development in the field. I then direct the reader's attention to the notion of clinical teacher identity, teacher identity in education research more broadly, the means of fostering it, and the tools developed to measure it. Later in the chapter, I introduce symbolic interactionism as the theoretical framework and discuss its assumptions on identity, making connections to the research questions I ask in my study.

Review of Literature

Faculty Issues in Dental Academia

There is a consistent shortage of clinical dental educators. Dental faculty are aging, and many programs are facing multiple upcoming vacancies and retirements in the coming years (ADEA, 2023b; Horvath et al., 2016; Wanchek et al., 2016). Several studies point out such trends in academic dentistry as burnout and early retirement of experienced faculty, increasing competition for new faculty, and a widening pay gap between dentists in academia and successful private practitioners (John et al., 2011; Wilson et al., 2019). The increasingly high level of student debt, projected onto significantly lower compensation for full-time dental faculty compared to their private practice counterparts (Istrate et al., 2023), may be an additional major deterrent for graduating dental students considering pursuing a career in academia. Several student loan forgiveness programs, both at the federal and state levels, are designed to encourage dentists to provide care to underserved populations and may include employment at non-profit organizations, including dental schools (ADEA, 2023c). In a 2018 survey, 52.3% of the graduating dental school seniors expressed an interest in teaching at some point after graduation (ADEA, 2018), and efforts are made to promote students' interest in teaching at multiple dental

schools across the nation (e.g., Horvath et al., 2016; John et al., 2011).

Roger et al. (2008) note that both junior and mid-career dental faculty members find navigating the pathways to promotion and tenure particularly challenging. While mentorship is suggested as a way to guide navigating institutional culture, facilitate networking, and improve job satisfaction (Al-Jewair et al., 2019; Bartle et al., 2021; Haden et al., 2008), and there is recognition of the necessity of mentorship for career growth, mentoring programs in dental schools, whether formal or informal, are conspicuously lacking (Al-Jewair et al., 2019; Bartle et al., 2021). Where present, these programs are voluntary and unregulated, and the mentees are responsible for finding their own mentors (Al-Jewair et al., 2019).

Faculty Needs in Healthcare

In academic medicine, there is a recognition that faculty members at different stages in their careers have different needs (Leslie, 2014; Steinert et al., 2016; Teshima et al., 2019). Early-career academic physicians are most vulnerable to attrition, with roughly a third leaving academia within three years of starting, whether for lack of institutional support, misalignment with the role, or family reasons (Jeanmonod, 2016). Early-career faculty may most benefit from formal opportunities to develop knowledge and skills necessary for an academic career, becoming a part of a community, and mentorship, although even strong connections, if singular, may not be sufficient to support a beginning academic (Leslie, 2014; Teshima et al., 2019). There is less investment in faculty support and development for mid-career academic physicians (Steinert et al., 2016), who are, in turn, most susceptible to burnout and are vulnerable to role transitions that may require additional development support (Campion et al., 2016; Dyrbye et al., 2013; Teshima et al., 2019). In her study of university professors, Neumann (2006) similarly highlights the understudied and relatively unspoken issues of the early post-tenure stage (or, as

she also calls it, early mid-career): holding on to learning and advancing it, becoming better learners, and helping their students learn.

Faculty in the advanced stages of their careers often lack clear goals and peer support and are, as a result, prone to experiencing dissatisfaction or feeling undervalued. Life changes, such as aging, loss, and matters of health, often introduce a shift in priorities and values (Leslie, 2014; Teshima et al., 2019). The opportunities to address the unique needs of senior faculty development, however, are virtually absent (Leslie, 2014; Steinert et al., 2016). Finding appropriate mentorship support for senior faculty members, in particular, presents a challenge (Leslie, 2014; Teshima et al., 2019).

Faculty Development in Dentistry and Broader Healthcare

Faculty development initiatives in dental academia are steadily expanding (Hendricson et al., 2007; McAndrew et al., 2018). In their survey of faculty development efforts in North American dental schools, McAndrew et al. (2018) cite a growing recognition of education-specific faculty development needs across dental academia and argue that faculty development has an impact not only on faculty members but also on dental students and staff members. Dental schools rely heavily on part-time instructors and retiring clinicians, who bring a wealth of clinical experience but lack training for academic careers and, thus, present unique professional development needs to their institutions. The study found significant growth in faculty development in dental education, as evidenced by the growth of dedicated offices and personnel, and the systematization of professional development efforts at the institutional level. However, a systematic review of reports on faculty development initiatives in academic dentistry published up until 2016 (Johnston et al., 2019) highlights a lack of evidence regarding outcomes in these programs, most of which were small-scale, local projects that mostly consider self-reported

perceptions of their participants.

Most faculty development programs in dentistry are focused on content knowledge, loosely based on theories borrowed from general education, or modeled on similar efforts in medical academia (Al-Jawair et al., 2019; Hendricson, 2007; Steinert et al., 2016). To establish whether dental faculty development enhances teaching effectiveness, Hendricson et al. (2007) turn to research in medical academia, only to conclude that the findings are insufficient to prove that there is any appreciable change. The dearth of systematic assessment is characteristic of continuing postdoctoral education for dentists more broadly, and the evidence regarding outcomes is often equivocal at best (Firmstone et al., 2013). In academic medicine, too, most descriptions of faculty development only report outcomes at the level of participant satisfaction and feasibility of implementation, while effectiveness in terms of other outcomes is uncertain (Teshima et al., 2019).

There is almost universal agreement that clinical educators should be trained to teach, and the interest in designing faculty development programs for clinical teachers is growing (Steinert, 2012; Steinert et al., 2016). However, Cantillon et al. (2019) cite poor attendance, inadequate knowledge transfer, general unsustainability, and resistance to change as major obstacles in existing faculty development programs. These obstacles, they claim, comprise the hidden curriculum of the clinical workplace that presents a hindrance to the transfer of ideas and techniques from faculty development and reduces the benefits of development initiatives for clinical teachers. The notion of hidden curriculum, broadly present in literature focusing on medical students, was extended to faculty by Hafler et al. (2011). With respect to faculty development, Hafler et al. cast formal, formative faculty development initiatives as the formal-explicit, and largely institution-driven factors such as promotion and tenure processes, space and

time issues, salary structure, or leadership as the elements of the hidden curriculum. Both explicit and implicit curricula, they argue, frame the formation of faculty identity. Dental education literature on hidden curriculum is not abundant and focuses on dental trainees (e.g., Masella, 2005; Meru, 2010).

Some researchers argue that part of the problem with the ineffectiveness of faculty development in healthcare is the lack of understanding of the process of becoming a teacher and the context in which this process occurs (Cantillon et al., 2016; Cantillon et al., 2019; Leslie et al., 2013; O’Sullivan & Irby, 2011; Steinert et al., 2019) and the predominant focus of healthcare faculty development programs on content and expertise in teaching and learning without much attention to the formation of a clinical teaching identity (Browne et al., 2018; Cantillon et al., 2019; Lieff et al., 2012; Steinert et al., 2016; Steinert et al., 2019).

Several studies in healthcare education have contributed to an increased understanding of the influence one’s identity has on the choices of professional roles, academic productivity, motivation, and satisfaction (Browne et al., 2018; Lieff et al., 2012; Steinert et al., 2019). Leslie (2014) and Steinert et al. (2019), among others, call for more identity-centric efforts in faculty development, asserting that a strengthened, “awakened” sense of a teacher identity would help clinical educators feel valued as teachers, pursue educational activities, and excel and thrive in the teaching clinic setting. Lieff et al. (2012) suggest that establishing and maintaining an “academic identity” is essential for the productivity and well-being of clinical educators. A more informed understanding of how clinical teacher identities arise in the clinical context would determine the success of faculty development initiatives for clinical teachers: their design, delivery, and evaluation (Cantillon et al., 2019; Leslie, 2014).

Teacher Identity in the Clinical Context

Although clinical teaching is a crucial component of healthcare education, most faculty members are usually untrained for their teaching roles (e.g., Browne et al., 2018; Cantillon et al., 2019; Steinert et al., 2019). Dental education follows suit: content knowledge and technical skills are assumed to serve as adequate qualifications to teach, no formal teaching training is required to become a dental instructor, and the notion of an effective clinical teacher is usually a matter of happenstance, not design (Al-Jewair et al., 2019; Jahangiri et al., 2013; Schonwetter et al., 2006). Upon entry into dental academia, the path to academic promotion is often unclear (Al-Jewair et al., 2019; Haden et al., 2008; Roger et al., 2008).

Triemstra et al. (2021) note that the clinical educator track is often not as well defined and often not as highly regarded as those of clinician-scientist, researcher, or administrator. A similar issue of definition and regard seems to be present in higher education (McCune, 2021; Skelton, 2012). Beginning medical educators often see themselves primarily as physicians rather than teachers (Browne et al., 2018; van Lankveld et al., 2017). Ibarra (1999) and van Lankveld et al. (2016) have pointed out a similar dynamic in early transitions from professional practice into teaching beyond the healthcare field. However, even established, seasoned faculty members primarily identify as physicians who also teach rather than educators in medicine, even when a majority of their time becomes dedicated to teaching (Taylor et al., 2007; Thomas et al., 2020).

There is abundant discussion around the development of professional identity in healthcare among students, which links to professionalism, the role of socialization in the profession, and the characteristics of a good healthcare provider (e.g., Cruess et al., 2014; Lane & Roberts, 2020). Attention to the notion of clinical teacher identity, however, is relatively recent. Healthcare education is beginning to recognize the importance of having a strong clinical

educator identity (Cantillon et al., 2019). Steinert et al. (2019) contend that faculty identifying as teachers in the clinical setting are more likely to want to teach, commit to improving as teachers, and get satisfaction from teaching and student learning. In the challenging balance between the needs of patients and the needs of learners (Browne et al., 2018; Cantillon et al., 2019; Lieff et al., 2012; van Lankveld et al., 2017), clinical teacher identity motivates faculty members to search for and make meaning of this balance (Steinert et al., 2019).

A review of dental education literature yields one study about the identity of dental and dental hygiene faculty (Pape et al., 2018). Results of a self-identification survey distributed to dental and dental hygiene faculty members across two dental schools revealed that (1) just over half of the respondents self-identified as educators as opposed to clinicians; (2) self-identifying as educators was associated with full-time status and engagement in education-oriented professional development (Pape et al., 2018). Beyond the survey responses, the study does not provide much detail on the educators' biographies or the reasons behind their choices to identify as one or the other. Additionally, a forced choice between clinician and educator does not capture the complexity of the tensions in roles and expectations associated with being a clinical educator.

In addition to the absence of published research on identity or dental academia before June 2017, Cantillon et al. 's (2019) overview of studies in clinical teacher identity in healthcare education reveals a largely atheoretical approach to most of these studies. Philosophically, most of the studies loosely fit under the umbrella of an individualist perspective on identity as a stable, coherent, internally synthesized construct.

Teacher Identity in Education Research

Broader education, on the other hand, has largely taken a social-relational approach to

identity as an interactive dynamic process between and in relation to the social and cultural context (e.g., Beijaard et al., 2004; Rodgers & Scott, 2008). In its sociocultural understanding, identity is considered to develop through social communication and interactions with the cultural, historical, and institutional environments, rather than being a state to be achieved (e.g., Beauchamp & Thomas, 2009; Beijaard et al., 2004; Holland & Lachicotte, 2007; Rodgers & Scott, 2008; Sfard & Prusak, 2005). It is both a product of influences on the teacher and a process of ongoing interaction with teacher development (Beauchamp & Thomas, 2009), shaped by the collective discourses and contributing a voice to the voice of the community (Sfard & Prusak, 2005). Despite the variability in definitions, certain features are essential to a teacher's identity: (a) it is ongoing, dynamic, and multiple; (b) it is a process of storytelling and, through that, (re)interpretation; (c) it has relational, contextual, social, and emotional dimensions; and (d) it is a source of agency (Beijaard et al., 2004; Rodgers & Scott, 2008). The interpretation of teacher identity as a central organizing element in teachers' professional lives emphasizes the integration and negotiation between the internal (personal and emotional) and the external (contextual and relational) in shaping a teacher's identity (Beauchamp & Thomas, 2009; Beijaard et al., 2004; Rodgers & Scott, 2008). Gee (2000) argues that identities get (re)produced in dialogue, and that being recognized as a "certain kind of person" (p. 99) is necessary for identity to exist, further stressing its inherently relational, dynamic, and storied nature.

Pillen et al. (2013) note that although identity creation takes place throughout the working life of a teacher, one of the key distinguishing features of the identity of pre-service and early-career teachers is its volatility due to the tensions between the personal and the contextual. The volatility is in line with the characteristics of the early career stage (Huberman, 1989) — reality shocks, sharp learning curves, and a sense of inadequacy or excitement. Others suggest

that teachers' identities are generally unstable, and the temporary stability can be affected at any time by personal, contextual, or combination (Day et al., 2006).

In a review of studies on teacher identity, Rushton and Reiss (2021) argue that the formerly underplayed importance of social connectedness and group membership in the formation of teacher identity shines through the lens of social identity theory. Social identity approaches enable a better understanding of why certain shared identities are established through the mechanisms of identification, ideation, interaction, influence, and ideology (Haslam, 2017) that promote and enable shared identity and group membership. Identification describes the incorporation of group membership into an individual's sense of self; ideation appeals to group norms and guidelines that shape the individual's behavior; interactions within and between groups, too, galvanize social identities; influence refers to the extent to which group leaders may shape the identities of their followers; and ideology provides the context for identification, ideation, and interaction (Haslam, 2017).

Influences on Teacher Identity

In education literature, a teacher's identity is said to shift over time under the influence of both internal (personal and emotional) and external (relational and contextual) factors (e.g., Avraamidou, 2020; Beauchamp & Thomas, 2009; Day et al., 2006; Flores & Day, 2006; Rogers & Scott, 2008). Flores and Day (2006) describe identity as a powerful interaction between personal biographies and the contexts of the workplace in mediating making sense of being a teacher. Day et al. (2006) stratify influential factors in four layers: macro (broad social and cultural features in social diversity and government policy), meso (social, cultural, and organizational features of schools and teacher education), micro (relationships with colleagues, students, and parents), and personal biographies (values, beliefs, and ideologies); a teacher's

identity, then, is a “shifting amalgam of personal biography, culture, social influence, and institutional values which may change according to role and circumstance” (p. 613). Some researchers highlight the role of emotion — brought to the context and generated by the context — in shaping identity (Avraamidou, 2020; Beauchamp & Thomas, 2009; Day et al., 2006; Ibourk et al., 2022; Zembylas, 2003). Others suggest that the choice of teaching discipline and its associated teaching culture, too, exert an influence on the identity (Beijaard et al., 2000; Enyedy et al., 2005). The context-specific, shifting positions one assumes in relation to others, too, influence one’s experiences and perspectives, which shape one’s voice, identity, and practice (Mensah, 2016, 2019; Mensah & Jackson, 2018; Moore, 2008a). Life histories, in their re-storied complexity, inform not only the instructional practice but also one’s development as a teacher (Avraamidou, 2016; Ibourke, 2016).

A systematic review of studies on teacher identity in higher education identified factors that strengthened teacher’s identity (contact with students, professional development), constrained this identity (the wider context of higher education), or could be either strengthening or constraining (value or lack thereof placed on teaching at work) (van Lankveld et al., 2016). In healthcare education, a study of teacher identity in the context of a longitudinal professional development program highlighted the influence of personal (cognitive and emotional), relational (connections and interactions with others), and contextual factors (program and external factors) (Lieff et al., 2012). Cantillon et al. (2019) broadly categorize the influential factors as intra- and interindividual, the former pertaining to the agency of the teacher in contributing to their development and the latter to the influence of the social world (environmental influences, role models, social contexts, and landmark formative events) on the teacher’s development and performance.

Triemstra et al. (2021) identified five domains of influence on the clinical educator identity of medical educators: community, institutional and training culture, personal characteristics, facilitators, and the professionalized status of medical education. In the community domain, they included mentors and role models, and belonging to supportive groups of educators. The culture of institution or training appeared to vary depending on the setting of work – most markedly between the positive influence of working at teaching hospitals vs. the negative influence of working at community-based health systems and affected the perceived faculty development and the very choice to pursue a career in education. The domain of personal characteristics included themes of affinity to teaching, agency, and motivation in seeking and solving issues in the educational system, perceived aptitude for teaching, and a related theme of responsiveness to learners’ needs. Three facilitating methods of entry emerged: being selected, serendipity, or saying yes. Finally, the professionalization of medical education, or the evolution of medical education as a field, was identified as a factor influencing the clinical educator identity.

Despite a certain lack of thematic coherence across the contexts, and although the proposed categorizations of influential factors only marginally overlap, there is a similarity in factors said to influence teacher identity: all appear to recognize the influence of personal, or intrinsic factors; relational factors, including mentors, colleagues, and students; and contextual factors, including the contexts of the institution and the profession more broadly.

Identity Measurement

Little quantitative research has been conducted on teacher identity, whether due to the conviction that quantitative methods are not a good fit for the dynamic, storied nature of teacher identity or because of the absence of a cross-context validated instrument for measuring it. A

systematic review of studies with explicit quantitative measurements of teacher identity published between 2000 and 2018 highlighted a lack of systematic approach to the development of these measurement tools: most were validated and used in isolation, without verification of replicability across contexts. A synthesis of components assessed across the studies yielded six domains: Self-image, Motivation, Commitment, Self-efficacy, Task perception, and Job satisfaction. None of the tools simultaneously measured all six domains and the interactions among them, and using the six domains to design a measurement tool would necessitate construct validation of these domains collectively (Hanna et al., 2019).

Only one 7-element, 35-question questionnaire identity measurement instrument was identified in the healthcare education literature (Starr et al., 2006); it is included in Hanna et al.'s (2019) review. Hanna et al. (2019) suggest interpreting the six domains as sets of meanings associated with teacher identity, along the lines of identity theory (e.g., Burke & Stets, 2009), and using them as guidance for identity research and targeted professional development. I did not use a quantitative tool in this study. However, select elements of Starr et al.'s (2006) instrument and the six domains outlined by Hanna et al. (2019) informed the design of interview guides used in this study. The design of the interview guides is described in Chapter 3.

Fostering Teacher Identity

Kaplan and Garner (2018) broadly offer exploratory and construction strategies, such as reflection, social conversations, and experimentation, in fostering teacher identity. The connection of identity to reflection is well-established (Beauchamp & Thomas, 2009; Sfard & Prusak, 2005; Walkington, 2005). Telling and retelling the stories, and reliving them through reflection (Connelly & Clandinin, 1999) is at the core of a teacher's identity (Beauchamp & Thomas, 2009; Watson, 2006; Woolhouse, 2012).

Identity is an interplay of internal and external forces; the contexts in which a teacher is immersed have a profound impact on identity (Ibourk, 2021; Rodgers & Scott, 2008). Professional development is one such context (Franzak, 2002; Luehmann, 2007; Watson, 2006; Zembal-Saul, 2016), which, some argue, in itself is the process of teacher identity (re)construction (Kaplan & Garner, 2018; Nesje et al., 2018; Rodgers & Scott, 2008). The supportive community and the sense of belonging that may emerge in the context of professional development suggest its influence as a community of practice (Lave & Wenger, 1991), in which identities are negotiated in the presence and relation to others (Kirkby et al., 2019; Izadinia, 2018; Weinburgh, 2020). Collegial mentorship by more experienced teachers also has a role in shaping identity (Izadinia, 2018; Walkington, 2005).

In her work on professional identity development, Ibarra (1999) builds on the notion of desirable or undesirable provisional selves: one's ideas about who one might become, would like to become, or fears becoming. Career transitions are one instance when one's professional identity is up for renegotiation. In this setting, Ibarra argues, holding space for experimentation with these provisional selves in the work environment is a necessary process in identity evolution, followed by evaluation of a possible self against internal standards and external feedback. Akin to this iterative process, new and developing teacher identities can be tried on for fit (Nesje et al., 2018), explored, and assessed. Teacher education programs are responsible for providing the space for such opportunities to experiment (Beauchamp & Thomas, 2009; Nesje et al., 2018).

Researchers in healthcare education, similarly, assert that faculty development should be strategically used to foster teachers' identities in addition to their skills and provide suggestions to do so: encouraging storytelling, giving space for reflection, being sensitive to the contexts, and

encouraging supportive relationships (van Lankveld et al., 2021). Steinert et al. (2019) suggest explicitly embedding identity and identity formation into faculty development programs or providing stand-alone programs with a focus on identity. Cantillon et al. (2016) and O’Sullivan and Irby (2011) call for collaborative, relationship-centered models of faculty development as “communities of practice” specifically supportive of teacher identities.

Educator identity development needs to be supported on an institutional level. Steinert et al. (2019) underscore the importance of organizational change towards a workplace environment supportive of educator identities, arguing that for an individual to feel that they have a professional identity, the internal change has to be coupled with external change. On the level of institutions, such change can be embodied by the clarity of promotion pathways; policies supporting educational excellence; and quality, relevance, and accessibility of resources, including networks of mentors and peers, faculty development opportunities, and peer review and feedback (Browne et al., 2018). Van Lankveld et al. (2021) similarly provide a list of recommendations for the workplace: attending to institutional culture, to the nature and content of the work that clinical educators do, and to the relationships the teachers engage in — in networks and with mentors.

Steinert et al. (2019) additionally emphasize the value of education scholarship and educator academies to the strengthening of educator identities and advocate for the increased visibility of teaching as a career to healthcare trainees as an opportunity to increase their commitment to pursuing academic careers and their identities as teachers

Given the central organizing place of a teacher’s identity, teacher professional development needs to explicitly address teacher identity and provide space for its exploration and (re)interpretation. Healthcare education is increasingly aware of the importance of clinical

educator identity and is calling for more identity-centric faculty development initiatives. Before these initiatives *can take root in dental education*, pun intended, more needs to be known about the nature of dental clinical educator identity, the factors that shape it, and the influence this identity has on the educators' commitment to the role and motivation to improve in it. In the scarcity of agreed-upon theoretical discussion in identity literature in dental education, I turn to symbolic interactionism and identity theory in particular as my theoretical foundations.

Theoretical Framework

Symbolic Interactionism

Of the many conceptualizations of identity that exist across disciplines, I chose to focus on its symbolic interactionist understandings. Symbolic interactionism is concerned with subjective meaning-making and focuses on the interpretation of subjective viewpoints -- of how individuals make sense of their worlds (Blumer, 1969). Symbolic interactionism holds that:

- Individuals interact with objects based on the meanings these objects have for the individuals;
- Interaction occurs within particular social and cultural contexts, in which objects (physical and social) and situations are defined or categorized based on their meanings;
- Meanings emerge from interactions with other individuals and with society;
- Meanings are continuously created and recreated through interpreting processes during interaction with others (Blumer, 1969).

The deeply social, relational, and storied nature of identity, and its essence as a dynamic process (Beauchamp & Thomas, 2009; Beijaard et al., 2004; Rodgers & Scott, 2008) and an interactional achievement (Gee, 2000), as I chose to interpret it, align with these tenets. I deliberately frame my quest into identity as making sense of self, further situating myself in this

theoretical framework. Identity, then, becomes a story of becoming and being and making sense of it all.

Identity Theories

Stryker (1980), operating under the symbolic interactionist umbrella, introduced the notion of roles as expectations attached to social positions, or symbolic categories that cue certain behaviors. Burke and Stets (2009) further developed identity theory, whereby identity is a set of meanings that a person uses to define who they are in their social categories (categorical identity), group memberships (group identity), social roles (role identity), or as unique individuals (person identities). These sets of meanings are hierarchically arranged; a particular set of meanings can become activated in situations that correspond to it, signaling identity salience, or an interactional and affective commitment to an identity. Identities are also characterized by prominence, or the individual's subjective assessment of how important a particular identity is to how the individual sees themselves as a person (Markowski & Serpe, 2018). Underscoring the place of interaction and relation in the process of identity, Burke and Reitzes (1991) introduced the concept of comparison and verification between an individual's self-view, or the meaning an individual holds for themselves in an identity on one hand, and the reflected appraisals, or the meanings they perceive others hold for them in that identity. Matches and mismatches between the two, or identity verification or non-verification, impact identity salience and prominence, and the motivation of the individual to behave in ways that would maintain verification or bring about such a change that the meanings once again match (Burke & Reitzes, 1991; Yarrison, 2016).

Social identity theory (e.g., Tajfel and Turner, 2004), another strand of symbolic interactionist interpretations of identity, offers a view of identity as categorizing oneself into in-

and out-groups. Identity, in the self-categorization sense, is a person's knowledge that they belong to a group, and is characterized by its accessibility based on roles and contexts, as well as its fit as defined by group membership. Social identity theory, too, is present in professional identity (e.g., Caza & Creary, 2016), teacher identity (e.g., Rushton & Reiss, 2021), and clinical educator identity (e.g., Triemstra et al., 2019) literature.

Part of the appeal of identity theory is its presence in professional identity research (e.g., Caza & Creary, 2016), teacher identity research (e.g., Hanna et al., 2019; Kaplan & Garner, 2018), and medical education (e.g., Lane & Roberts, 2020). Identity theory and social identity theory are understood to be complementary rather than competing (Stets & Serpe, 2013), although the emphasis on roles in identity theory, rather than group belonging in social identity theory, is more in line with the sense-making that I attempted to gain access to in my study.

Chapter 3: Methodology

The purpose of this study was to explore how clinical dental educators make sense of themselves as teachers. To pursue this inquiry, the following overarching research question was asked, with Identity Theory as the acting framework:

How do early mid-career clinical dental instructors at a private urban dental school make sense of themselves as teachers? In particular, there are two sub-questions:

1. What factors emerge from their stories about teaching as influential in shaping how they make sense of themselves as teachers?
2. How do they make sense of where they are and where they are going as educators?

This chapter provides an account of the research design and methods implemented to answer these questions. I begin by describing the methodological approach, followed by a description of the setting and the participants. I then present the methods of data collection and data analysis, as well as elements of validity and trustworthiness, and ethical considerations associated with the study.

Rationale for Research Approach

The goal of qualitative research is to explore, explain, or describe the thoughts, perceptions, and behaviors of participants (Marshall & Rossman, 2011). Qualitative methodologies allow the researcher to gain insight into and understand the meaning the participants make of their experiences and perspectives (Marshall & Rossman, 2011) while recognizing the multitude of factors affecting these experiences and perspectives (Creswell & Poth, 2018). Merriam and Tisdell (2016) describe the purpose of qualitative research as understanding the process of meaning-making, rather than the outcome, and describing how experiences are interpreted. Rather than searching for causal explanations for a single reality,

qualitative research embraces and encourages multiple answers from multiple voices and stories (Marshall & Rossman, 2011).

There are many methodologies to choose from in qualitative research. Narrative inquiry aims to capture stories, both as an expression of lived experience and as a way to think about and analyze narrative data. Stories are central to narrative inquiry (Clandinin & Connelly, 2000), making it an appropriate choice of method when the individuals telling stories can shed light on a specific issue, by virtue of, for example, being representative of a particular population (Creswell & Poth, 2018). Webster and Mertova (2007) suggest that a narrative offers a way of reflecting on the experience and allows for its holistic interpretation, richness, and complexity. Individuals often reveal themselves through stories, thus providing insight into their meaning-making process (Savin-Baden & Van Niekerk, 2007), into their identity and personality (McAdams, 2008). My interest in gaining insight into the identity of clinical dental instructors through the stories they tell makes a case for a narrative approach.

Setting, Participants, and Data Collection

Two categories of participants were involved in this study: clinical dental instructors and their former or current students. Clinical dental instructors form the primary focus of this study, while their students supply an additional, relational perspective on the practice of clinical teaching. All participants of this study are currently or have previously been affiliated with the same private urban dental school.

The dental school offers a traditional four-year predoctoral dental curriculum, divided broadly into two preclinical and two clinical years, and a range of postdoctoral graduate programs. The class size is close to the national average. It is one of five dental schools in a 100-mile radius (of the other four schools, two are public and two are private). Similarly to these

schools, the patient population for the student clinics is predominantly covered by federal and state insurance.

Participants

Clinical Dental Educators

For this study, nine “early mid-career” clinical dental instructors active at the same private urban dental school were invited to participate over institutional email. Appendix A contains the recruitment email. The invited educators varied in their backgrounds, paths of entry into teaching, dental specialty, and teaching workload (Creswell & Poth, 2018; Merriam & Tisdell, 2016). I had established relationships with all nine of the invited educators and have been a student of six of them. At the time of recruitment and throughout the study, I was no longer affiliated with the dental school. For this study, five clinical dental instructors agreed to participate in the study, and all five completed the study in its entirety, including questionnaires and three interviews described below. Table 1 summarizes the participants’ demographic and professional backgrounds. All names in the study are pseudonyms.

Table 1

Educators’ Backgrounds

Educator	Gender	Race	Age	Specialty	Years in Teaching	Classroom Teaching	Teaching Full-Time
Dr. Blossom	F	White	40-49	General	10	-	-
Dr. Foxglove	M	Black	30-39	General	3	-	+
Dr. Kalmia	M	Asian	30-39	Specialist	5	-	-
Dr. Linden	F	Asian	40-49	Specialist	9	+	-
Dr. Ivy	F	White	30-39	General	6	+	+

*Full-time teaching is defined as more than 3 days/week.

Dental Students

Fifteen current or former dental students with a history of interaction with each of the five clinical dental instructors in the teaching clinic setting were invited to participate in the focus group over institutional email. Appendix F contains the invitation email. I had established relationships with seven of the invited students, and I have been a classmate of two of them. I have not been a teacher for any of the involved focus group participants. Eight former or current dental students agreed to participate in the study. Of the eight focus group participants, two were recent graduates of the dental school, three were fourth-year dental students, and three were third-year dental students.

Table 2

Students' Backgrounds

Focus Group Participant	Gender	Race	School Year
Apple	F	White	3
Banana	M	Asian	Graduate
Grape	F	Black	Graduate
Mango	F	Asian	4
Orange	F	Asian	3
Pineapple	M	Black	3
Strawberry	M	Asian	4
Watermelon	F	Asian	4

Data Collection

Educators. The following sources of data were collected from the educator participants: asynchronous questionnaires, three semi-structured interviews, and career artifacts. I describe their design and administration below.

Questionnaires. Using Miller's (2014) approach, I administered an asynchronous questionnaire consisting of four broad, multi-part questions meant to both collect historical data (such as, "How long have you been an instructor here?") and serve as a primer for the subsequent interviews (such as, "In a few words, how would you describe yourself as a clinical teacher?"). The questionnaire was sent to the prospective educator participants over email at the time of the invitation to participate. Most participants submitted their questionnaire responses either simultaneously with their consent to participate, or close to the time of the first interviews. Questionnaire responses allowed the individual educator participant to begin articulating their teaching practice and their sense of self as an educator and allowed me to tailor the subsequent interviews to the participant's teaching history. During analysis, the questionnaire responses were weaved into the educators' stories. The questionnaire is found in Appendix B.

Interviews. Interviews as a method of data collection are particularly valuable in attempting to uncover how people make sense of their lives. In selecting early mid-career clinical dental instructors at a private urban dental school as "experts" on the phenomenon I wanted to understand -- being a dental clinical educator -- I attempted to get insight into their stories as "local points" of meaning and meaning-making (Lareau, 2021). The interview guides were meant to encompass the six meaning domains of teacher identity and draw inspiration from the questionnaire items (Hanna et al., 2019) while focusing on bringing out the story. A built-in recording feature in Zoom was used to capture the interviews and transcribe them upon completion.

In-depth, one-on-one semi-structured interviews with the five instructors formed the crux of this project. Using semi-structured interviews allowed for a balance between planning and flexibility, leaving space for change in the order of questions, for follow-up probing questions,

and/or skipping or adding questions as necessary (Brinkmann & Kvale, 2015). Because I chose to interpret identity as a dynamic process, I conducted three interviews with each participant. The first interviews were conducted in July 2022, at the beginning of an academic year, when a new class of third-year dental students just transitioned from didactic education to the teaching clinic. The second interviews were conducted mid-academic year, in January 2023; and the third interviews were conducted in April 2023, at the conclusion of the academic year. The first interview aimed to capture an initial snapshot of the clinical dental educator identity. The second and third interviews aimed to give this identity longitude, dimension, and depth, and to provide a space to member-check throughout the process of data collection and analysis (Lincoln & Guba, 1985; Miller, 2014). The interview collection timeline is summarized in Figure 1.

Interviews are uniquely positioned to allow each participant to tell their story and to place

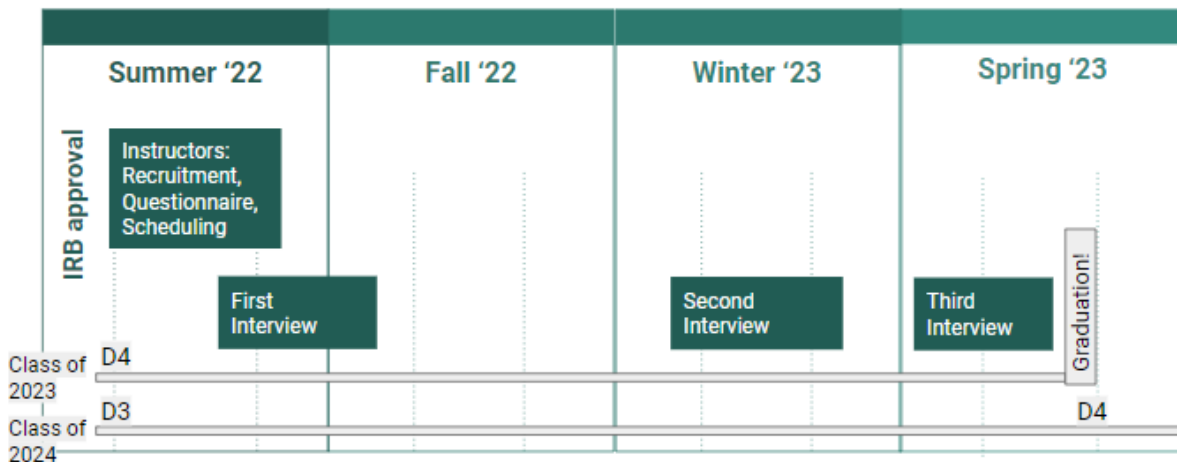


Figure 1: Timeline of educator interview collection.

the told story, in the participant's voice, at the heart of research (Gerson & Damaske, 2020).

Framing identity as a story in the research questions allowed the participants to tell their stories of becoming and being clinical teachers as they have experienced it, while also letting me gather specific details about the contexts, events, and relationships that shaped these stories (Brinkmann

& Kvale, 2015; Luker, 2008). In asking about how the participants make sense of where they are and where they are going as educators, I attempted to both position the sense-making in the context of life history and, at the same time, ground the sense-making in the participants' present, taking advantage of the ability of interviews to trace the development of dynamic processes over time (Gerson & Damaske, 2020). Interview guides are found in the Appendices (C-E).

Artifacts. Drawing on Neumann's (2006) approach, I obtained artifacts of the participants' teaching careers: CVs and publicly available announcements of recruitment and promotion made by the school. These documents helped me create the context and structure for the interview responses, thus situating the narratives (Gubrium & Holstein, 2009) and "thickening" the descriptions (Creswell & Poth, 2018). Although I did not explicitly refer to the content of the artifacts in my questionnaire or interview guides, these documents enabled me to tailor how I conducted the interviews, served as a source of validation, comparison, and, at times, disconfirmation of my findings, and situated the snapshots of educator identity in the broader contexts of the dental school and the profession more broadly.

Students. Relationships with students may be some of the most pertinent ones to a teacher. The absence of an understanding of the educator identity of clinical dental instructors justified exploring how outside observers see the role of a clinical educator. Three focus group sessions were conducted with the same group of participants at similar intervals to educator interviews: the first was held in July 2022, and the following two were held in January and April 2023, respectively.

Focus Group Interviews. Using an instant messaging platform, WhatsApp, rather than conducting in-person focus groups, had several advantages: practicality, mobility, approximation of the participants' habitual spaces of communication, and inclusivity (Colom, 2021).

Following the email invitation and return of the informed consent forms, I generated and emailed a link to an end-to-end encrypted WhatsApp group chat, allowing participants to join. Each session was held over 5-7 days, whereby the participants were able to chime into the posed questions asynchronously, engage with each others' responses through messages and non-verbal reactions, and respond to my follow-up prompts. After each session, the chat transcript was exported into a text file, deidentified, and saved. After the third session, all data were deleted from the chat. The focus group guides are found in the Appendices (G-I).

Researcher Journal. I kept a journal and memo-ed throughout data collection and data analysis along the categories of methodological, analytical, and additional reading memos (Creswell & Poth, 2018; Miles et al., 2014). For example, I took notes throughout the interview, immediately upon completion of the interview, and upon transcription when feasible, using the contact summary format (Creswell & Poth, 2018; Miles et al., 2014). In and around my interactions with the participants, I took note of contexts, non-verbal cues, and any clarifications or requests that arose extemporaneously. In my engagement with the data and in the ongoing review of literature, I took note of emerging themes, connections, and patterns. I also made a deliberate effort to reflect on the data, my processes of collection and analysis, and myself as a researcher regularly throughout the study.

The different sources of data from the dental instructors, students, and documents reflect my effort to triangulate the data I collected. Triangulation reduces the limitations of any one

source, enhances the validity of the findings, and increases the rigor of the study overall (Creswell & Poth, 2018; Tracy, 2019).

Data Analysis

The emergent and evolving nature of narrative data requires iterative analysis throughout the process of data collection (Creswell & Poth, 2018; Lareau, 2021). Rather than following a predetermined sequence of collection, analysis, and writing, I repeatedly engaged in these activities, allowing them to occur simultaneously and to inform one another. For example, as I began reading through the first interview transcripts, relistening to interview recordings, and reflecting and memo-ing on emerging ideas, additional questions and ideas arose that informed how I conducted focus groups and future interviews. As such, data collection, analysis, and writing were occurring simultaneously throughout the study, and throughout collection and analysis, I repeatedly went back and forth between the data sources.

One of the most common approaches to analyzing qualitative data is coding (Saldana, 2016). A code in qualitative inquiry is “a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of a language-based or visual data” (Saldana, 2016, p.4). As such, the codes are simultaneously prompts for deeper reflection on the data’s meanings, condensations of the most meaningful material, and heuristics for discovery (Miles et al., 2014).

Because I wanted to look for both the stories told by the educators and the themes emerging across these stories, my approach was two-fold, and combined elements of a thematic analysis and literary orientation (Creswell & Poth, 2018). The coding methods I selected aligned with these aims.

My overall approach to educator data analysis followed the three-tiered analytical question method of data interrogation proposed by Neumann and Pallas (2015). On the level of the individual educator participant, I ask, “What does this participant say about the factors that influence how they make sense of themselves as a teacher?” and “How does this participant make sense of where they are and where they are going as an educator?” The answers to the questions on this level form the stories presented in Chapters 4-8.

On the level of the study sample, I ask, “What do these participants say about the factors that influence how they make sense of themselves as teachers?” and “How do these participants make sense of where they are and where they are going as educators?” I answer these questions through cross-case analysis, by, first, decontextualizing and visually displaying the similarities and differences across several emergent themes, and subsequently recontextualizing them to maintain their immersion within individual stories (Miles et al., 2014; Tesch, 1990). The answers to the questions on this level are presented in Chapter 9.

Finally, in the discussion in Chapter 10, I situate my findings in the broader literature, and make tentative propositions on “What clinical dental educators may say about the factors that influence how they make sense of themselves as teachers” and “How clinical dental educators make sense of where they are and where they are going as educators.”

Positionality Statement

I approached the data from a position of certain personal and professional experience: I am a graduate of this dental school and a student of many of the educator participants, having experienced their clinical teaching firsthand. I am a classmate and friend of some of the student participants, and some of our conversations inevitably involved dental education. I am also a graduate student in education and, at the time of completing this dissertation, a junior faculty

member at a dental school, although as a specialist I participate almost exclusively in classroom teaching. Finally, throughout my graduate studies, I have engaged with literature on science and healthcare education, and on identity theory. I therefore acknowledge that the themes I articulated were influenced by these sources (Gerson & Damaske, 2020; Maxwell, 2013; Saldana, 2016). At the same time, I operated under the assumption that individuals' perceptions could be explored through my interpretative activity as a researcher (Smith et al., 2009). Below, I discuss the process of coding and analysis that I followed.

Preparing to Code

As soon as I collected the first interviews with educators and focus groups with students, I started reading through interview and focus group transcripts to obtain and maintain familiarity with their contents, and to trigger preliminary analytic considerations (Saldana, 2016; Tracy, 2019). I began writing methodological and analytical memos, reflecting on possible connections, disconfirmations, and patterns, and continued to do so throughout the process of writing the findings and discussion of the study (Creswell & Poth, 2018; Miles et al., 2014). The memos were organized into methodological, analytical, and additional reading categories, allowed me to keep track of and implement evolving ideas, and supported me in developing a deeper understanding of the stories I was retelling and the patterns I was beginning to notice (Miles et al., 2014).

Educator Data

All coding was carried out in Dedoose software, which allows the researcher to employ multiple coding approaches, visualize frequencies and co-occurrences of codes, combine codes, and write memos, among other functionalities. I began the first cycle of coding upon completion of the first interviews and continuously refined the coding scheme throughout the process of

collection, analysis, and writing. I combined interview, questionnaire, and artifact data, and subjected them to sequential first cycle coding method passes.

Bearing my charge to retell the stories, I employed narrative coding, using literary terms to discover the structural properties of these stories (Saldana, 2016), and the temporality-sociality-place framework (Clandinin, 2013). I began by coding the data from each participant, including questionnaire responses and interview data, by using the elements of a Hero's Journey (Rogers et al., 2023): protagonist, to describe the character; shift, to describe the change in circumstances leading up to the journey; allies, to describe the hero's companions on the journey; challenges, to describe obstacles on the journey; and legacy, to describe the impact of the journey. On the second pass, I coded the data using the temporality-sociality-place framework (Clandinin, 2013), noting times, people, and places mentioned in the stories.

I then extracted the codes with their associated text fragments into an Excel spreadsheet, which allowed me to visualize and reorder the literary elements of the participants' stories, and to re-arrange and re-weave them back into the stories I could retell. Not all coding elements appeared in or were relevant for all of the stories; however, implementing this analysis facilitated the process of re-storying. Each resultant story is presented in a narrative chronological format to stay true to the narrative inquiry methodology (Clandinin & Connelly, 2000), following the same layout for each story: introduction of the educator, their entry into teaching, being a teacher, and their path forward. I spend the longest in the "being an educator" section of each story. The resultant stories are presented in the Findings Chapters 4 through 8.

In the search for themes, I then subjected the data to inductive first cycle eclectic line-by-line coding that included elements of In Vivo, descriptive, and affective coding (Saldana, 2016). I repeatedly attempted to seek disconfirmation and gaps in the data (Gerson & Damaske, 2020)

and made notes to discuss my findings with the participants at subsequent interviews. One such disconfirmation instance occurred in the first interview with Dr. Ivy and its subsequent coding. Dr. Ivy described being pleased about being called intimidating by a student. Because I struggled to integrate the epithet and the pleasure derived from it into the evolving narrative of becoming the professor Dr. Ivy needed when she was struggling in dental school, I brought my perplexity to our second interview. A conversation evolved on the complex balance between enabling accountability and enforcing discipline. It is found in Chapter 8.

Following the rounds of first-cycle coding, I started condensing the codes into fewer and more salient categories by using axial and selective coding. Axial coding involved ensuring sufficient representation of the data by the codes, merging synonymous codes into broader categories, and reassigning codes where necessary (Saldana, 2016). Finally, through the process of selective coding that was rooted in both inductively developed codes and deductive codes grounded in my research questions and the theoretical framework (Saldana, 2016), a final coding scheme was developed and applied to all fifteen interview transcripts from the clinical faculty. The final coding scheme is primarily oriented towards the research sub-questions:

1. What factors emerge from the educators' stories about teaching as influential in shaping how they make sense of themselves as teachers?
2. How do they make sense of where they are and where they are going as educators?

Student Data

Although I began engaging with student data as soon as the focus group data collection began, I started coding the focus group transcripts as I began the second-cycle coding of educator data. Doing so allowed me to approach focus group data with a sense of direction the educator data analysis was beginning to take, and to focus on those elements of focus group data that

could support or shed new light on the educator data, in particular clinical teaching, relationships between students and clinical instructors, and the role of dental educators. All three focus group transcripts were subjected to the same iterative coding and analysis process.

I began an analysis of the focus group data by employing In Vivo and descriptive coding in the first cycle. As I coded, similarly, I was memo-ing on the themes and patterns that were emerging within student data, and on the connections that I was beginning to notice between student and educator data. The coding began with In Vivo and descriptive coding in the first cycle. Following the first cycle passes, I extracted the codes and combined them into fewer categories, with the aim to crystallize and consolidate first cycle codes, and chose to focus on those codes that allowed to establish connections between student and educator data (Saldana, 2016).

The students chose not to speak about the participating educators directly. The findings from the focus groups were best collated within the cross-case analysis, by intertwining the themes from the focus groups with the themes emerging across the five educator stories.

Trustworthiness, Reflexivity, and Ethical Considerations

The validity of this study rests on triangulating multiple data sources to support the findings (Creswell & Poth, 2018; Tracy, 2019). By using multiple methods of data collection, I was able to gather a more comprehensive and in-depth understanding of the story of becoming and being a dental educator: the rich and detailed data from the interviews, the chronological and contextual scaffolding from the questionnaires and career artifacts, the inherently interactional point of view of the student focus groups, and the research journal as an instrument for documentation and reflection. The validity of the study was further supported by trusting and transparent relationships among the participants and me as researcher and colleague. As a

professional insider, I had the advantage of familiarity with the setting and the jargon; the disadvantage of that, however, was the possibility of ascribing my meanings to the findings or taking certain assumptions for granted (Lareau, 2021). I continuously explored how my identity, beliefs, perspectives, and goals influenced my decisions at multiple points throughout the study. This reflexivity, as well as member checking, was important in maintaining the credibility of the findings (Lincoln & Guba, 1985; Maxwell, 2013).

Member checking for clarification or input was done within the second and third interviews, through paraphrasing of participants' earlier responses and summarizing for clarification, and upon completion of data analysis, through sharing the re-structured stories and emerging themes and requesting narrative accuracy checks and viability of my interpretations (Lincoln & Guba, 1985; Miller, 2014).

Beyond acknowledging the influence of my experiences, paths, and positionality on the questions I asked and the claims I made, reflexivity played an important role in the ongoing act of seeking disconfirming data, rather than focusing on the findings I may have expected or hoped for (Gerson & Damaske, 2020).

In sum, I attempted to maintain the richness of the data by using multiple data collection methods, getting to know the participants for the year in which the data were collected, designing interview guides with open-ended questions and further probes, taking detailed notes, and staying immersed in the participants' voices (Maxwell, 2013).

Ethical Considerations

Biographical research is inherently ethically charged, as it deals with intimate material (Measor & Sikes, 1992; Tracy, 2019). Before beginning the study, I received approval from the Institutional Review Boards of both Teachers College and the dental school. All participants

were provided with consent forms, which articulated the purpose of the study, the implications of participating in the study, and my role in the study. I relied on consensual, voluntary participation and the candid relationships between myself and the participants in eliciting their story, and ensured that all participants, at all times, were made aware that their participation was entirely voluntary, that they could withdraw from the study at any time, and that their privacy and confidentiality were maintained through pseudonyms, removal of identifying information to the extent possible, and the secure collection and storage of data.

In the following chapters, I present five stories, focusing on the educator identities of five dental school instructors, the factors influencing these identities, and ways forward emerging from these identities.

Chapter 4: Dr. Blossom: “Make it fun”

Educator	Gender	Race	Age	Specialty	Years in Teaching	Classroom Teaching	Teaching Full-Time
Dr. Blossom	F	White	40-49	General	10	-	-

Dr. Blossom describes herself as “a mom . . . which takes up most of [her] time” and a “general dentist that teaches at the dental school and practices in the faculty practice.” She became a dental instructor after postgraduate residency training in general dentistry and states she has had “no training” in education. She has been a dental instructor teaching predoctoral dental students for over ten years at two different dental schools, initially full-time and now part-time, and strives to help the students find enjoyment in learning and doing dentistry:

I try to get students to look at the whole treatment plan instead of one tooth at a time. I try to be positive and get students to enjoy the work. I think dentistry should be fun, and I want the students to learn the techniques to make it fun and a little easier.

Entry into Teaching: “I just wanted a job”

Dr. Blossom never thought she would want to pursue a career in dental academia. She jokes as she recounts graduating from dental school:

I would like to tell you that I have a grand plan or a great story as to how and why I became a dental educator, but that is just not true. I remember walking out of my dental school on the last day and saying to myself, “I will never walk into another dental school again.” I think about that often and laugh because of how my life has turned out.

Dr. Blossom recounts her experience of dental school as a dental student as “such a boys’ club” with “a lot of older males that just yelled at you all the time” and the “mentality that we are mean to you because people were mean to us.” Dental work itself, however, was “strangely therapeutic”: “You just sit there, and it’s quiet, and you kind of get tunnel vision and you just focus on excavating the caries, or you focus on making that crown prep.”

Dr. Blossom “always thought [she] would work in a private office, and that [she] would have [her] own office and just do that,” but life had other plans. After residency, she was planning to move to a new city and hoped to find an associate position at a private office. The only contact she had in the new city was at a dental school. She “didn’t even think about the prospect of working at a dental school,” but a mentor encouraged her to reach out, pointing out that “private practice wasn’t what it used to be” and that dental education could be a good path for Dr. Blossom. She sums up her entry into teaching as “just a random thing where someone [she] knew knew somebody there” and, to her surprise, she “just really enjoyed it.” The unintentional entry into teaching introduced her to “some of the most passionate and competent people [she] had ever met” who inspired her “by their love of dentistry and teaching.”

Being a Dental Educator

In her current position, Dr. Blossom teaches less and practices more. It is the teaching, however, that keeps her at the current dental school. She attributes her entry into and continued commitment to teaching to the guidance, encouragement, and recognition from her mentors:

I have been blessed with mentors who have been able to direct me in ways I might not have directed myself. Several people recognized me as what they thought was a good educator and encouraged me to teach more. Now, even though I still practice, I would never want to just practice. It’s the teaching that keeps me [at the dental school].

Having been fortunate to have had “people who took [her] under her wing” at various stages of her career, Dr. Blossom views mentors as a valuable external resource for calibration of one’s self-awareness through recognition of strengths and feedback for areas of improvement:

One of the things that’s been helpful for me is, in education and in any field, [was] finding good mentors and finding people that can look at the things that you do and tell you [what you’re good at]. We all have some self-awareness, but sometimes you have things that you might be really good at that you don’t realize, or there’s just certain things that you might not be good at that you think you are, but somebody else can look at you and say, these are things that are good about you, or they can help you.

Within her department at the dental school, Dr. Blossom enjoys unquestionable support from the department chair, and a sense of camaraderie and shared experience:

I think our department is very supportive, and I feel bad because with COVID we've lost some of that camaraderie. But we had a meeting a month or two ago, and it was nice because everybody from the department gets together, we all talked about the problems that we've had, some of the issues that we were working through, and it was so nice to finally get together and discuss because we all have the same issues, but we don't always see each other all the time. Sometimes it's nice to know that everybody's having the same issues.

Being a part of a women's mentorship group, similarly, was beneficial in providing community, diversity of experiences, and an open space for conversation:

It was really supportive and really helpful because it was nice to have people from all different departments... Different people and it was nice to get together and talk with everybody. I felt we discussed a lot of topics involving leadership and leadership in reference to your own position . . . I felt like we really touched on a lot of stuff, and [mentorship group leader] really took a hand at making sure that everybody in that group felt like they had support and were getting what they needed from [the school].

Education Experts

Dr. Blossom's support circle extends beyond mentors and colleagues. Repeatedly claiming to not be an "educational expert", Dr. Blossom often turns for teaching advice to the seasoned non-dentist educators in her life. Some of the most practical and funny advice came from a retired kindergarten teacher, and Dr. Blossom has successfully, and somewhat to her surprise, applied the kindergarten teaching techniques to her dental students:

When I first started teaching and even now, I ask my mom and her friends [for] education advice all the time. They are all retired teachers. It's funny because I get the best advice from my mom's friend who is a retired kindergarten teacher. You can and I have applied kindergarten teaching techniques to teach dentistry. Now, I will emphasize that I am by no means an educational expert, but these retired teachers have given me some good tricks.

To Dr. Blossom, sourcing teaching advice from expert outsiders and applying it in teaching dentistry is justified by the common fundamentals of teaching and learning, regardless of discipline:

I have a cousin . . . a Ph.D. in education . . . I'm teaching dentistry, but the fundamentals of teaching are the same. This is how I feel about it. I'm not a teaching expert. But there are fundamental ways of how you can teach people and how you can engage people. And so, if I sometimes have an issue with the student, I'll literally ask my cousin. I'll explain the problem and ask for advice. I'll be like, "I've been having this problem. I don't think they're listening or hearing me", and then she'll be like, "Well, why don't you try this." And so I get advice from her, and then also my mom's a teacher. So sometimes I'll say, "This student I'm having an issue with," and then she'll give me advice as well.

Professional Development: "A bunch of dentists that don't have educational training"

Dr. Blossom frequently returns to the idea that she is not "a teaching expert" and neither are most dental educators. Her biggest issue with dental education is the lack of appreciation of the difference between "being a good dentist and being a good dental educator" and the frequent assumption that "anybody can teach" without additional training:

There are ways, not just one, there's tons of ways to educate people, and it's a different skill than being able to sit down with the handpiece. It's like running a business, too. I'm on the Faculty Practice committee and I can tell you, just because you're a dentist and you know how to do dentistry does not mean you understand how to run a business. Just because you're a good dentist doesn't mean you know how to teach. And when you get smart people that are very successful in their profession and you're like, "This is how you teach?" [and] they're like, "Well, I already know because I'm really smart." No, no, no, it's a different skill set. Teachers go to school for a reason, to learn how to teach. And yes, we're dentists, and we learned how to be dentists. But we're not taught how to teach, we're not taught how to run a business, we're not taught these things. It's like saying somebody that has their MBA doesn't know anything -- well, that's not true, they know how to run your business.

Dr. Blossom traces her own appreciation of the difference between being an expert at a skill and being able to teach a skill to being around teachers like her mom and her mom's friends:

I bring that point up because my mom was a teacher and my mom's friends are teachers and my younger brother is a teacher. There's a lot of people that teach at the school. I'm not saying they're bad teachers or anything, not necessarily in our department, but you see it in other departments. You can be a great [specialist], but teaching a skill is different than being good at it.

Dr. Blossom craves learning about teaching and believes that education experts could be a resource for teaching-specific professional development for dental educators. Although the timing of the workshop often conflicts with her practice days, she has attended several workshops, including training on topics like diversity and implicit bias, grading and competency assessment, and learning styles and differentiated feedback. She found these workshops to have a positive impact on her teaching practices, and be applicable in the setting of teaching clinics:

I think it's important to learn and attend lectures about how to grade our students, and how to deal with competencies. If a student fails something, what kind of feedback to give the student? I think that's important. And I think if given the opportunity to attend the trainings from teachers, we need to, because you can learn a lot from teachers . . . It would be really great if we could have a workshop or something where we -- and we do this now but we used to not do this -- where we could have an educator come in and talk to us about how to educate people . . . because there's an art to education!"

Although she feels that her department at the dental school has been supportive in encouraging the faculty members' growth as educators, the culture of the institution at large does not prioritize "learning how to teach":

I do think we need to do more learning of how to teach as an institution and as a profession. We need to do more learning of how to teach. And I do think [our dental school] is ahead of a lot of institutions, because [current department chair] is in tune with that. It would be nice to attend lectures where they give a lot of information about teaching dentistry, but that's just not something they provide for us. I think they should. I think they should encourage it. But this is not the culture here.

In addition to the organized workshops and of her own initiative, Dr. Blossom seeks and applies teaching advice that comes from the trained educators in her mother's friend circle. She recounts applying the principles of teaching and learning shared by the kindergarten teacher, such as encouraging ownership and active participatory learning in the students:

I used to answer the questions a lot, and [mom's teacher friend] taught me to sit back and ask them the questions, and then they have to come to you with the information. And listen to people complain. You don't have to agree with it, but if you have a student that doesn't like something, be like, "I understand that you don't like that, but this is just how we do it here and that's what we're going to do," which is her kindergarten logic as well.

It's like you have to be responsible for your actions now. And the rules apply to everyone. And when you actually sit down and talk to people and you use these techniques, they're like, "Oh yeah, you're right, the rules do apply to me and everyone the same."

Dr. Blossom continues to reflect on herself as a teacher, and finds patience, empathy, and non-judgment to be increasingly valuable in navigating her relationships with the students:

I've tried to be more positive . . . do more positive reinforcement. And it's gone much better, and I felt like that taught me a good lesson to always remember - don't jump to the conclusion that a student is being disrespectful. They could have something else going on. It was a reminder that I have to think about those things.

Exercising empathy and non-judgment prompt Dr. Blossom to be more aware of the challenges faced by the dental students, and to support, encourage, and uplift the students as they attempt to achieve their goal of graduating from dental school:

I've tried to be less judgmental when I see their work. I'm trying to be more understanding if they don't know something, and I'm trying to be more helpful because I think the students got beat down by a lot of people, and they just want to graduate. And so I'm trying to not be the person that's beating them down more, I'm trying to be the one that's getting them out of here.

Teaching Students: "It doesn't have to be so heavy"

Dr. Blossom enjoys being a dentist. Focusing on the mechanics of dental work was "strangely therapeutic" for Dr. Blossom through a stressful time as a dental student. She continues to find similar solace in practicing dentistry now, and hopes to instill a similar enjoyment of the profession in her students:

I know . . . we're just going to sit there and we're going to do the work. And then that's all I think about. I just think about that, and my mind's not racing with all the other thoughts. It's almost meditative in a weird way. But I guess not everybody's funny like that, but that's the kind of feeling I want the students to have. I don't want it to be so stressful all the time, you should enjoy it.

Teaching dentistry, too, is a source of fun and enjoyment for Dr. Blossom:

I think the whole [teaching] thing is fun. I don't think [students] think coming into clinic that it's fun, but it doesn't have to be so heavy. I think that's what I mean by fun. [Students] take everything so seriously, and the students come in so stressed.

Able to empathize with the vulnerability and stress of being a dental student, she finds that putting things into perspective can help rediscover the joy and satisfaction from the profession:

I guess what I mean by fun is, when I was a student too, you equate your self-worth with how well you prepped that [cavity] or you didn't prep that [cavity], and then you compare yourself to all the other students around you, and you're like, "Well, they've done 10 crowns and I've only [done one]." It's a constant comparison. And you're constantly stressed and you're constantly worried worried worried about everything that's going on. And everybody just needs to chill. This is fun. We come in here and we prep our teeth and we do our fillings and we leave and go home. It's not that we don't care about the patients, but it's not as big of a deal as we think it is. I know we have to make it a big deal sometimes to teach [students].

Dr. Blossom makes a deliberate effort to foster enjoyment, treat students as colleagues, and equip them the best she can for future learning: "in dentistry, the learning never stops." It is the responsibility of the good educator to foster teaching moments: "you're not a good teacher if the student didn't learn anything, even if it was something bad."

She sees enabling and empowering the student as part of her duty as an educator, referring again to being seen and encouraged as a trainee:

When I think about the way I teach, I like to think that when I work with students, I help them see what it is that they're good at. And then they can go forward in that direction, because we spent so much time focusing on what we're not good at, or what we didn't do right, and I can pinpoint multiple instances where people said things to me as a student, as a resident, that changed the course of where I am. And you as a person, you have to listen to people. Having people there to guide you is the most helpful thing of all of this.

She thinks that her ability to empathize with the students and her non-inflammatory approach to teaching are evident to the students, and contribute to why the students find her to be more approachable than some other instructors:

I definitely think that [the students] probably don't think I'm a stressed-out crazed individual. I noticed they'll come to me, sometimes before other instructors, especially if there's a problem, because they know I'm not really going to yell at them. I'm just going to help them out, so I think a little bit of that gets passed on . . . I try to teach them and be

respectful of them and try to get them to learn in a way that they are able to without putting them through the ringer.

In addition to seeking immediate clinical support, being younger and building deliberately collegial relationships encourages dental students to gravitate towards Dr. Blossom with certain questions about becoming and being practicing dentists:

I notice this - as the students get towards the end of their time in dental school, half of the questions they ask me are dental-related, and the other half are questions about how to run something and about work-life balance. They ask me a lot more questions about what I do with my assistant. How does the front desk work. I don't see them asking older faculty these types of questions. I think they see us as younger, and they feel more comfortable asking us these questions, and since we still practice, they tend to come to us for that information more than to other people.

Dr. Blossom connects her commitment to building positive, collegial relationships that may be unlike some of the relationships students have with other faculty, to her own experience as a dental student:

When I was in school, it was very male heavy. It was very like, "I did my dues so I'm going to make you do yours," and I thought to myself, that's not what I want to do. You're not paying your dues to me. We're going to learn together where I'm going to teach you things. I want it to be fun, but I still want us to learn things. I feel like I get a better response from that. I feel like when I was in school, we had a lot of older males that just yelled at you all the time. And I never felt that you got a good response from that.

Having been in the students' shoes with a "boys' club" of a faculty was amplified by being a parent in attuning Dr. Blossom to the dynamic of the student-instructor relationship. She attempts to disrupt the self-perpetuating hazing mentality of dental academia with positive reinforcement and incremental, digestible teaching:

I am a parent, and you read all the things about child psychology . . . they say, if you don't yell at your kids and you have more positive responses, that you actually get more positive behavior. Dental school . . . had that mentality that we are mean to you because people were mean to us. I thought, well, I want to teach, but I want to be nice to the students and I want them to learn something. I want to feel like I can explain something to them and make it make sense, so I feel like I'm good at teaching a procedure in a logical way that makes sense, step by step, without overwhelming a person.

Teaching in dentistry comes with its challenges. Dr. Blossom mentions the “lack of accountability in the ranks” and the “political side of academics.” Of the student-instructor dynamic, she finds student apathy to be one of the most frustrating and challenging aspects:

With the teaching part you do get a fair amount of students who just don't care about what you're teaching, and that part is frustrating, and sometimes you feel like you're trying to teach, [and] they just don't care about the . . . filling that we're doing today. But that's not the point because I still have to teach you whether you care or not, and that is probably the more difficult part.

The relationships with students evolve, as does the students' confidence and competence, as the academic year progresses and fourth-year dental students approach graduation. The students begin to be more confident not only in their clinical skills but also in their interactions with faculty. This evolution is bittersweet, too. “[The end of the year] is always a sad time of year because we finally get the students where we want them, and then they are graduating away from us.” Becoming a parent gave Dr. Blossom a new perspective on graduation:

After I became a mom, I remember going to graduations and feeling more proud of the students, because before I never thought of it as somebody's child, and I think to myself, if my son's did this I'd be so proud. So, you go to the graduations, and you see the parents and you see how proud they are, and it makes you think, these are people's children and they're very proud of their kids.

Becoming an educator was an unexpected turn of events for Dr. Blossom. Reflecting on her ten years in dental academia, Dr. Blossom remarks on the constant flow of life at a dental school that comes with each new class of students:

I always thought I would work in a private office, and that I would have my own office and just do that, but I realized I don't know if I would like that, because it's the same people four or five days a week. There's no change . . . The nice thing with teaching is there's the students that come in new all the time, so you constantly have different people coming in, different types of people, different opinions. I'm relatively young now but eventually as I get older -- I see this now even -- as you see the ideas of the world shifting with the students. Even things like music and fashion, I feel you stay more current in dental school or any kind of school, and I enjoy that because it's fun to see how “the young people” are living, and it's nice to see [students] and work with [students] when [they]'re learning, and hopefully we can help [them] on [their] way.

Going Forward

Beyond direct clinical supervision in the teaching clinics, Dr. Blossom continues to grow into a mentor and advocate capacity with colleagues, and “when newer faculty come in, [tries] to be friendly and help them and get them to meet certain people.” Having experienced how guidance from a mentor can change the course of a career, she takes on the responsibility to similarly give forward to both students and colleagues, including mentoring and helping colleagues and students.

In her commitment to making dentistry and teaching it fun, she says, “ultimately, you should have a good time if you do this for the rest of your life. If you hate it, it’s going to be a miserable rest of your life.”

Over the year of the study and talking with Dr. Blossom, she achieved her academic goal (not a teaching goal, as she made a point of differentiating it) of writing a paper with dental students and getting it published in a dental journal. She is now working on her next paper to submit for publication. At the time of writing, she was appointed to the young faculty advisory council to the Dean of the dental school. Reflecting on our interviews, she remarked that the process of (re)storying made it sound like she “had a mission,” which she enjoyed.

Chapter 5: Dr. Foxglove: Nurturing, not handholding

Educator	Gender	Race	Age	Specialty	Years in Teaching	Classroom Teaching	Teaching Full-Time
Dr. Foxglove	M	Black	30-39	General	3	-	+

Dr. Foxglove describes himself as a “dentist who teaches dentistry”, “a laid-back chill guy” and “an easy going ... individual committed to making a positive impact on those around [him].” He is “passionate about the things [he cares] about, and [is] committed to helping others and making an impact in the lives of people that [he comes] in contact with, especially people that [he is] tasked with helping.” He became a dental instructor after a postgraduate residency in general dentistry and a year of full-time dental practice at a community health center where he first experienced supervising a trainee. He states he has had “no training” in education, and has now been a full-time dental instructor teaching predoctoral dental students for over three years. Dr. Foxglove considers himself to be “a very involved and nurturing clinical teacher who expects the best from his students.”

Entry into Teaching: “Young people can have a place in academics”

Dr. Foxglove recalls becoming interested in teaching within the first few years of graduating from dental school, and

really first thought it was something I could do when I got to do a little bit of supervising when I was in residency . . . Up until that point, I knew it was an option, but never considered it an option for myself. I thought I would do private practice or community health. Those are the two areas I would consider.

Wanting to move to the city, he applied for an opening at a dental school, thinking “it’d be cool to have a job in academia.” Not having heard back initially, he accepted a different job offer and spent a year working at a community health center in the city. It was there where he first got to “teach and supervise a resident, and [he] enjoyed that. So [he] decided to try again at

[the dental school] to do this in a more full-time capacity . . . applied and interviewed again,” and got the position.

Dr. Foxglove recalls being inspired by a faculty member while he was still a dental student, who was

always such an excellent resource and really was so engrossed in his role as a teacher and really went above and beyond. So that was always inspiring to see because he was also a younger faculty. It was always inspiring to see a younger faculty so involved.

It was the same mentor who opened Dr. Foxglove’s mind to the place younger educators can have in dental academia:

The majority of my faculty in dental school were a lot older, so I think to see somebody young, so involved in academics, it opened my mind a little bit - that this isn’t something only for older people or people who are at the end of their careers. Young people can have a place in academics as well, like young clinicians and younger individuals in the profession.

His residency director, too, was “a really good teacher, really good educator, and also somebody that really seemed to enjoy being an educator. So that was also somebody else that was inspiring to see. And that made [Dr. Foxglove] think - this could be something [he] could do down the road.”

Now as faculty at the dental school, Dr. Foxglove feels well-connected to “a lot of good people that are in positions to help and give advice,” including members of the administration at the dental school and the institution at large, as well as colleagues in the division.

Being a Dental Educator

Professional Development: “More efforts to be on the same page”

There are opportunities -- albeit not extensive -- that support Dr. Foxglove’s growth as an educator, including continuing education and degrees. Yet, he feels like there is room for more. Dr. Foxglove feels that the department would benefit from department-specific sessions, in

particular around standardizing clinical concepts and protocols, and feels empowered to bring it up as a suggestion:

Just regular development sessions [would be good], nothing fancy, maybe department-specific development sessions where the department comes together and reviews things, more efforts for everybody to be calibrated, on the same page. One thing I don't see a lot is there isn't a whole lot of calibration, so everybody kind of does their own thing, which is not necessarily a bad thing. I think it's good to have different perspectives, but I think there should be some basic kind of calibration where there are general concepts and protocol that we all follow . . . I do wish that as a department we came together more often to discuss things and have development sessions. . . It's something I would definitely speak to the department about doing. I think it's something feasible.

Dr. Foxglove recently got involved in a two-year-long training opportunity held by an industry partner of the dental school, and, making notes from his experience as a trainee, finds that the faculty there “have a way with words - a very nice way of telling you when something is wrong or something could be better, [which is] something to admire and maybe emulate.” Becoming a student prompted him to look “at how the faculty in [the program] teach, how they interact with [the trainees] . . . that made [him] reflect on how [he teaches].”

Teaching Students: “I have a duty to the patient”

Dr. Foxglove remarks on his view on the scope of responsibilities of a dental educator and the relationship between teaching dentistry and doing dentistry. He brings up the notion that it is not the technical but the interpersonal skills, chairside manner, and patient management that the clinical dental educator needs to teach the students because those are not the skills easily taught in a classroom:

I think I've learned that you don't necessarily need a whole lot of years of experience, because as long as you're a dentist, you're going to know more than a dental student. I think there are certain things that are important if you're going to be somebody teaching others how to be dentists. You need good chairside manner. You need to know how to manage patients. Because that's a skill that, just across the board, dental students don't have, they just don't have patient management skills. Why would they? Because that's not really something you can teach in the class [unlike manual skills].

What makes a good dentist, then, goes beyond technical skills. Ultimately, it is the interpersonal skills, patient rapport, and clinical reasoning that a dental educator must possess to effectively teach others:

You can't really teach patient management or chairside manner. Those are things that some people may just have naturally, but most have to learn that. So, I think it's important to have some of the skills like that if you're going to be teaching others. You could not have the greatest hands, you could teach students who do better dentistry than you, and that's fine, but you need to be able to teach them how to manage patients, talk to patients, be able to relate to patients. And also overall treatment planning and case management skills. I think those are things that make a good dentist. And that would make a good dental teacher.

Being a dental instructor is "a pretty significant part" of Dr. Foxglove's life "just because it's what [he does] every day, for the most part." He sees his charge as an instructor to not only explain the concepts, which he can do well in "very simple terms," but also to enforce and foster the development of time management skills. He also feels that being "not that much older than the majority of [students]" allows him to be able to "relate to [the students] personally, maybe a little bit better than some of [his] colleagues that are a little bit older." He finds that "sharing [his] own tips and tricks . . . [his] own little practicing pearls . . . [allows] students to get a different point of view, to try different techniques and figure out what works or doesn't work for them." He shares, "I always encourage students to work with different faculty - to get a different perspective."

Dr. Foxglove likes to think the students see him as "the cool teacher." Although he describes himself as "a laid-back chill guy" and suspects that the students also perceive him that way -- maybe "a little too easy" -- he hopes to get across that he is "very 'by the book' [and likes] to 'dot all [the] Is' and 'cross all [the] Ts'." Putting patient well-being at the forefront, he is judicious in the autonomy he affords to the students and is a big proponent of staying hands-on with them throughout the patient visits:

During the clinic session, I'm still going to be very involved in the procedure, so I don't give them that much autonomy when the patient is there. But I do expect them to be on top of things outside of the appointment and getting prepared for the appointment. So during the appointment, I'm still going to check in whether they ask me to check in or not. I'm still going to be involved. But I do expect them to be aware of the patient's history, the treatment plan, the plan for the day's visit, and what follow-up is needed. That I expect them to be on top of.

To Dr. Foxglove, close supervision reserves the space for appropriate feedback, while leaving room for autonomy if no feedback is required:

I'm in full support of checking at every step because then you can give good feedback. And sometimes even with checking every step, they can still have autonomy - if they are performing at an acceptable level, you don't have any feedback. So it's more so just having those checks in place.

Dr. Foxglove has had to learn that patience and empathy – and most importantly “patient-empathy” -- are some of the most important qualities of a good clinical dental instructor.

However, in the absence of confidence in the students' abilities, he has to be “alert”, and patience and empathy have to be balanced with upholding the duty to the patient as a healthcare provider:

I don't like to use the word ‘micromanage’, but I do micromanage when I'm on the clinic floor, because it's important. You're supervising students who are doing things for the first time, a lot of them don't really know what they're doing. So it's important to be involved and check in a lot with the students. Because things can go very bad very quickly. So definitely you got to be patient and you have to be very involved and aware. And I think you do have to be nurturing and create a space where students feel comfortable asking questions. If they don't feel comfortable asking questions or working with you then that could be an issue.

At the same time, when thinking back to his experience as a dental student, he remarks on the value of holding the students accountable rather than “holding their hands”:

Any students I work with - I really try to hold them accountable, and I want them to take ownership and responsibility of the patient care that they're engaged in. I think that's important. So, I'm trying to emulate that more, because I think that was really vital in my education, when I was a dental student.

Recounting his experiences with the faculty that played a vital role in his dental education, Dr. Foxglove makes a distinction between nurturing and handholding, including the high expectations set for the students, the encouragement to meet those expectations, and the accountability placed on the students in their pursuit of those standards:

I liked the faculty that held us accountable, and the ones that expected us to perform at a certain level. I think that is sometimes lacking [at our dental school], I feel like we often don't hold them accountable. When I was in school, a good majority of my faculty were nurturing, but they didn't really hold our hands. There were high expectations of us, and I think we do a little more hand-holding than we should here.

The first time Dr. Foxglove felt like he had to take on a nurturing role was through one of his first interactions with a dental student, which was not something he expected to have to do or something he saw in himself. He recalls:

One of the first students I ever worked with had a challenging patient who ended up getting upset and left the appointment. And [the student] started crying. And that was something I wasn't prepared for. I wasn't expecting that. And this was one of the first days that I was teaching, so I had to calm her down and tell her it was okay and that she didn't do anything wrong, which she didn't. And these kinds of things happen and sometimes patients are gonna be dissatisfied if you have to deliver bad news to them, which in our field sometimes we have to. And I think that that was probably the first time in that role I had to take on a nurturing role. And since then I've had to take on that role often. And I think up until that point I've never seen myself as much of a nurturing person. So that's definitely something I've come to embrace.

Teaching dentistry comes with its challenges that are at times outside of the educator's control, like scheduling and staffing of the student clinics. Although these circumstances do not affect how Dr. Foxglove sees himself as a teacher, he finds that the scheduling in particular "accelerated things, so sometimes there's no time to really teach in those sessions . . . [which] changed the way that [he has] to teach or not teach." His approach to decisions about how to teach has always been "very patient-centered . . . based on what's needed for the patient." Ultimately, there is "a duty to the patient." Balancing patient care with student teaching further

complicates identifying and acting on teaching moments in the clinical setting, and often necessitates prioritizing a successful and timely patient visit over a teaching moment:

Working with students doing dentistry who are a lot slower or working with a lot of students and not having the time to sometimes really teach and explain things more. Doing it for them or telling them what to do and not having the opportunity to explain concepts as well as I'd like. So that's always been a challenge because if we're in a time crunch, I'm probably just going to go ahead and do it and I might not be thinking about using the opportunity to teach because I just want to get things wrapped up. At the end of the day it is a patient that we're taking care of, so there's a certain standard of care we have to deliver. So that's always been the most challenging part, I would say, for me.

Aware of this challenging balance, Dr. Foxglove is attempting to not let staffing and scheduling affect the way he wants to teach, and is "trying to become more conscious of explaining things rather than doing them", especially since the students do not always proactively ask "why":

I noticed that I would tell them things, and don't really give background or explanation, and then they don't ask. And sometimes it's such a busy environment that it is easier to just instruct or tell them to do something, give them a piece of information without really explaining why it's relevant or why I'm asking to do something. That was something I realized, so I've been trying to do a better job at that.

Going Forward

As Dr. Foxglove gets to know the third-year students he works with throughout the year, he sees himself "developing a mutual trust" with them and finds "seeing the growth, the transformation" to be the most rewarding part of teaching. Reflecting on the experience with the student that opened his eyes to the necessarily nurturing part of an educator's role, he says:

that student . . . lacked so much confidence in the beginning, when I first met her. And I saw her progress over the course of that year. And she saw patients that were challenging, just like that one. And she never really lost her cool. So it was nice to see her grow and scale the confidence. So that's the part of the job that I liked the most.

Thinking about his future in academia, Dr. Foxglove looks forward to growing into a leadership capacity, citing his rapport and interpersonal skills as a strength:

I am interested in student affairs. I think I have a lot of skills that would be useful in leadership roles. Looking long-term, that would be a direction that I hope my career will go. I think that I naturally have a good rapport with students and I work well with them in the clinic, but also on initiatives outside the clinic, especially with the student groups. I advised some of the groups, and assist them with events, and volunteer. So, I think that rapport that I have with them would translate well into a student affairs position. And I think I'm able to communicate well with people. So, I think those are good qualities to have in a leadership role.

Chapter 6: Dr. Kalmia: “You tell a player, you show a player, you let them do”

Educator	Gender	Race	Age	Specialty	Years in Teaching	Classroom Teaching	Teaching Full-Time
Dr. Kalmia	M	Asian	30-39	Specialist	5	-	-

Dr. Kalmia describes himself as “a [practicing specialist] and a part-time attending at [the dental school].” He enjoys playing sports and is a self-professed “sports junkie - watching sports like basketball, football” and is “really fascinated by, besides how players are, how teams function.” He became a dental instructor immediately following three years of postgraduate specialty training, and simultaneously entered private specialty practice. He has now been a dental instructor for over five years, at the same school where he completed predoctoral and postgraduate training, and teaches both predoctoral students and postgraduate specialty residents. He considers himself to be an approachable instructor who “[allows] students to work their way through problems.”

Entry into Teaching: “Forced into it”

Dr. Kalmia did not have the opportunity or interest in teaching while being a student in dental school, and only first considered an educator career in residency, which had teaching as part of the program requirement: “One, because you had to do it. Then, because you’re forced into it, you have to see and feel how you are as a teacher.” He now finds that being both an educator benefits his clinical practice in that it “[ensures] that [he is] well-versed in the foundational concepts of [the specialty], which helped [him] grow in private practice.”

Being an Educator

Dr. Kalmia’s approach to teaching is inspired by “a blend of different teachers” he has had, “and the reality is in any university you get a lot of different faculty - some you mesh well

with, some you maybe don't mesh well with, but then you realize you learn a lot from them, too." Making a sports analogy, he takes the best of what he has learned "from each coach, essentially, and [became his] own coach." He recalls appreciating and emulating instructors who were generous with their time:

As a dental student, I appreciated teachers and residents who took their time to explain concepts to me and allowed me to ask questions. When I became a . . . resident and had the opportunity to teach, I reciprocated and found the experience very rewarding.

Thinking back to those teachers he learned from, it was being patient, down to the trivial tasks of donning gloves, and creating a safe space for student autonomy that stood out the most:

I appreciate the [teachers] who invested their time in me and who weren't just "let's just get it done and you can go home". The ones who actually took some time to show me even how to put gloves on. Who would sit down and actually show me if I needed help with something . . . Those who sat down in front of the patient and showed me something hands-on - I appreciated that. Those who gave me independence to try things out and try things a different way - I appreciated that.

One of the key differences may be the attitude of the instructor towards teaching as an investment, commitment to the student's growth, rather than a job on a fixed schedule:

What makes a good teacher - I think they're invested in you. They're willing to help you grow, which sounds very cliché, but I think there are some people who just treat it as a 9-to-5 job: "I don't really care, just do the work and let me go home." People who stuck out the most to me were those who spent extra time to help me out, whether it was staying through the lunch break, staying after hours to help me answer something. Those are things that made an impression on me, those are things that I hope to convey to students, too. Being invested in someone.

Although teaching is a rewarding investment, Dr. Kalmia does not always feel sufficiently supported in his growth and improvement as an educator, due in particular to the lack of formal, specific, and actionable feedback on his teaching:

I don't get much time for feedback on how I am as an instructor. Whether it's from dental students, from residents, or even my colleagues, or the rest of the [department]. I rarely get any feedback for what I am doing. And even though that makes it easier to go along with my day, I sometimes wish I knew what I could do better in, what I did well in, what I should have done better in. The only feedback I get is from students and residents,

just casually passing by. But honestly, I don't know how helpful it is. So I think if I had more formal feedback about my work, I'd feel better supported.

Dental Educators: Young faculty cannot afford to teach

Dr. Kalmia attributes the scarcity of young faculty in dental academia to financial and time pressures. As rewarding and enjoyable as teaching dentistry can be, it is often a significantly less sustainable career choice for recent dental school graduates:

From talking to my colleagues, one of the biggest challenges -- and I have some colleagues who really enjoy teaching, but the biggest thing is -- financially, that's the big drawback. You have to really enjoy teaching or live close by, to save time commuting. Luckily, I live close by and I can still afford to keep doing all that, but some people [say], "I need to be at private practice 5-6 days a week, and I would love to teach, but I just can't." So I think that becomes a big thing. That's why only retirees and volunteer people are the ones who do it. But I would have to say that's a pretty big obstacle that I don't know what the solution is, unless universities are willing to pay a lot more money for it. That's the main issue that I would see.

Although Dr. Kalmia himself can commit two days of his week to teaching, while spending the rest of the week in private practice, it does not seem feasible to increase his teaching workload. He feels that this is a shared predicament among young clinicians:

It will be tough to take on more days [as an educator]. The difficulty with young clinicians who are also in private practices [is] you do get busy in private practice, too, and then you also have a family to take care of and spend time with, so it will be hard for me to commit more days to [dental school] without affecting my private practice.

Teaching Students: "Push and pull"

Dr. Kalmia feels that being a young educator is both a challenge and an advantage in his relationships with trainees, both students and postgraduate residents. Although the proximity in age to some of his trainees makes him seem more approachable, the lines of educator-trainee relationships can get blurred:

I think [the trainees] see me as a colleague, to some extent, because a lot of the time I'm of similar age. I think it's a challenge as a young faculty [member], I'll have residents who are older than me . . . Even though I have some experience under my belt and they have none, I think they view me as a young attending, who they don't feel threatened by,

where they can ask questions. At this point in my career, at this age, that is how I would want to be seen. If I had 30 years of experience, then sure, I would like to be seen as some highly respected person. But as someone who is clearly still in a young clinician phase, I'm still learning every day, too, and I'm happy to relay that information to the students and residents. And I think it's tough for any young clinician, as a young attending clinician to be seen otherwise.

In his teaching, Dr. Kalmia attempts to actively bridge the gap between didactic material and real-life scenarios for the students, and "really [tries his] best to be hands-on and show them what they've learned in a lecture, but have probably never seen before. "Let me show you - this patient is a pretty good example of what this concept is".

Emulating those teachers who had the most impact on him as a student, Dr. Kalmia attempts to embody the principles of student autonomy in how he teaches, which often requires allowing students to make and learn from mistakes. Balancing the well-being of the patients with fostering teaching moments, he breaks the procedures up into steps:

I feel the most learning happens when you make a mistake, when you struggle and have to figure it out by yourself, to some extent. I try to have that done in a safe manner. I strategize . . . with checkpoints . . . I think about the scope of treatment, the checkpoints, and I'll review the plan with the [trainee] . . . And then, once I know they have an understanding, they start. When they get to the checkpoint, they call me, and I come to check. It has a hands-off balance to it.

Having had to work through challenging situations as a clinician practice, he is now able to appreciate the value of a stepwise approach in clinical teaching, which both acts as a patient safeguard and an opportunity for trainees to take ownership of their clinical reasoning:

I never really appreciated when someone forced me to do everything, step by step, and I had no latitude to think on my own, as a student. I feel, coming outside to practice, I've learned the most when you're stuck in the middle of a situation. How do you reason yourself out of it? What decision do you make on the spot? So, I try to get that muscle stretched more for students and residents. I ask them "What do you think?" and from there I'm trying to see where their logic is going, safely, before we go to the next step.

Having previously compared himself to a coach, who now coaches himself, he makes a similar sporting analogy when describing his overall clinical teaching philosophy: "you tell a

player, you show a player, you let them do. At some point they have to do it under supervision, [so] I just try to think about what are safe boundaries for them to do something:”

Managing 80 students who are running around with drills in their hand [is] like trying to manage the football team with 50 players. How do you learn how to manage, which buttons to press with each person. I like to look at a lot of things outside of dentistry for inspiration. And I think in sports it is really fascinating to see what makes a good coach. So I think about that a lot, and the analogies I tried to morph into dentistry. I feel like I never thought that deeply about my own capacities, but it’s interesting.

Staffing and scheduling challenges necessarily accelerate how soon trainees are granted autonomy. The trainees have to be aware of their limitations, while the instructor has to be aware of the circumstances under which enabling such autonomy is appropriate:

At some point it is trust. They have to do [the procedure] somehow. If I’m lucky I can be there to supervise them, one on one. But we’re understaffed, often we don’t have a chance to do that . . . Like taking a tooth out. They might take an hour plus. But if it’s 5pm, we should have stopped that ahead of time. If it’s 3pm, go have fun for the next 20 minutes, [and] if you’re really flustered, come get me. So, I think of it as timing of schedule.

The autonomy does often require a watchful eye; “double-checking, triple-checking things in the records. Not always taking what they tell . . . in person at face value. Trying to be more cautious.” Dr. Kalmia continues to calibrate his ability to “push and pull” by granting students more freedom and discerning how best to support individual students:

[I] honestly look a lot at each student. Where I think they should be in their skillset, where they are in their confidence, and I try to think about how much guidance do they need, and what’s the best way to get the best out of them, whether that’s someone who needs a little bit more hand-holding, or whether that someone who needs to be a little more directly told what they should do.

As he continues to find the balance between being hands-on and hands-off, he reflects on the instances of miscalibration:

I’ve gotten better at that. I think I’ve learned how much to get involved, and how much you can get hands-off. Sometimes things backfire, where I gave a little bit too much hands-off, and then things didn’t go as planned. With [specialty care] especially, things are kind of irreversible. There are times I kick myself, “I should have been there for that

one extra step a little bit more.” And other times I feel I could give them a little more independence than I realized.

Overall, he feels that his ability to make decisions on the appropriate level of autonomy improves with getting to know the students better:

I’ve gotten to learn some of the once unfamiliar faces. I’ve tried to learn who is more motivated, who is more “smart” about things. Who’s more skilled, who’s more curious about things. Who’s willing to learn - that’s what sticks out to me. And who’s not willing to learn, who just wants to fast-forward to May and get out. The relationships evolved.

The decisions now come to him faster, and are quite nuanced, considering the amount of experience, the level and the appropriateness of the trainee’s confidence, and their openness to being taught. He reassesses and calibrates his approach not only student to student but also throughout the individual patient visit:

I have to keep reminding myself that the amount of experience that each person has varies significantly. So, a dental student who’ll be with the second patient in their life needs a lot more time versus a resident who is a doctor. So learning how much push and pull to give and how much freedom to give, very quickly, that decision is something I’ve gotten better at learning. I don’t know if there’s a way to describe that, but it’s very quickly learning how much trust to give a student - is something that I have learned. I look at how prepared they are, I look at how confident they are in their speaking. Which can also be a red flag. People who are extremely confident in the wrong direction also need a lot of helping, like “Be a little humble.” I look a lot into preparation they give and even their attitude towards things. Are they willing to be taught - “Hey, I have a question” or “I know what I’m doing.” And then by mid-treatment I look at how they are actually proceeding. Do their hands and actions match their words? And that helps verify if they need more help and how trustworthy are they.

He does, however, find the cyclical nature of the academic year and the turnover of students year-to-year challenging. Each year, a new inexperienced cohort begins their clinical training, which breaks the perceived momentum of growth and improvement:

I relate a lot of it to coaching a sports team: how does a good coach coach his sports team? What I find challenging is the turnover every year. It is very repetitive, which makes sense, but it feels like it’s tough to make progress. You manage a team, you want to train your players, train your team to all move forward and make forward progress. And then come July 1, we have to reset all over again, and then it’s like Groundhog Day all over again. And it’s part of what teaching is, but me, I enjoy the feeling of gaining

momentum and watching that growth go versus, especially [dental students], where it's only two years of it. It's a very sharp turnaround again on July 1. I think that the more challenging part is to be patient about that.

The high volume of students in a class and the discontinuity in working with the same students are similarly frustrating and contribute to a sense of lack of progress:

Where I struggle is I don't see the same students repeatedly. So it's hard to keep track of . . . students from each year. "I think I've taught you this before, but I think I last saw you a few months ago?" So, it's like revisiting square one again. "Did you forget this, did you not?" . . . It's sometimes hard to tell if I've been with this student before. Without the repetitiveness, it's hard to tell how much just comes in through one ear and goes out the other.

The cyclicity, initially inducing impatience, is becoming more familiar and predictable, and Dr. Kalmia feels that the frustration is gradually giving way to better patience and an increasingly nuanced understanding of the pattern in the students' academic growth from the moment they set foot on the teaching clinic floor:

I think I've gotten better about [being patient]. The feeling was a little novel at first. For the first year it's "Cool, it's teaching." You start to feel out who you are officially as an attending. Second year is "I'll think about what I did first year wrong and improve." Third year, "This seems familiar and repeating again." Fourth and fifth year, . . . I just finished my fifth year, I feel like I'm ready for that feeling, and we just started the new academic year this month. And I'm used to that feeling of "I know what to watch out for." It comes [with the] new cycle. So, in some ways I've developed a better patience or predictability with it.

As the students progress through their clinical years, there is, on occasion, a less savory evolution that happens:

[With third-year dental students] you know there's no malicious intent at all, it's very pure. It's like a very young kid trying to learn to walk for the first time; they just want to be helped. It's a lot more pure and less personal agenda. More trying to be a young doctor, learning . . . As the urgency towards the end of school year happens, that malicious intent picks up. I notice those patterns, especially when they begin the fourth year. They start to feel that urgency, and then they feel a little bit more comfortable. And that's typically when rule-bending starts to happen. I'm more aware of that. Not malicious intent, but there's that tendency to bend rules and try to sneak by. That's a lot more prevalent with 4th-years.

Going Forward

Formal feedback would help Dr. Kalmia feel better supported as an educator. In its absence, he feels that becoming better at being a dental educator requires “a lot of self-reflection”, especially when events do not unravel according to plan:

Whenever things go fine, I like to give praise to the student or the provider. When things don't go well, that's when it's time to look inwards and ask, “How [could] I have improved on that in that instance? Is it something I should have communicated? Was it the decision-making on my part? How can I have better instructed this person? Is it a communication thing, or is it a clinical judgment thing? Even when things go well, you should try to inwardly look - why do things go well and what defines well? What defines success? And when things don't go well, it's trying to figure out why did it not go well, and what can I do when in the future, how do I avoid that.

Being both in practice and teaching provides him with a nuanced understanding of what defines success from multiple perspectives:

Each year I think about it. From a patient's perspective - Am I not in pain? Was it not expensive? Does it feel good in my mouth? Do I trust the doctor? To a provider, we think about clinical success versus if there is pain. There's a lot of different definitions, I think.

To an educator, who “[tells] a player, [shows] a player, [and lets] them do”, seeing the player be able to “do” is the indicator of success:

As an educator success, I think it's imparting lessons on a student that they remember. Or seeing that they don't make the same mistakes again. Because it is very frustrating when you just taught them something, and then next week they do the same exact thing. But seeing them avoid that same pitfall, a month later, is . . . rewarding . . . seeing growth [is the most rewarding].

Dr. Kalmia entertains pursuing more academic goals, like research, although becoming a full-time professor or “lecturing and doing all these presentations is not necessarily my main goal in my career. It would be nice, sure, but my main goal has always been to be a great clinician. . . who enjoys teaching and finds it rewarding.” Doing both is “a perfect balance”: he gains more confidence because he is in private practice, and as he gains more experience, he “can more confidently guide clinical decisions.”

When I think about my goals, I think of a balance of private practice goals - trying to become a better clinician, have a more successful business, keep growing -- and then as an educator - I think it's trying to do more as an educator besides just clinical teaching. For instance, this past year I got a little more involved in lecturing and that's a different muscle to stretch. So teaching in different ways, besides just clinical supervision . . . trying to find ways to teach in other facets, besides just clinical supervision.

He enjoys teaching and plans to keep doing so:

I enjoy that every day is different. When people ask me if I recommend teaching, I say I do, because I think being in one place, in the same four walls, any five days a week, is going to be exhausting regardless of what you're doing . . . It's pretty challenging, but what I appreciate is that every day is different, so one day I am in practice, next day I'm teaching. It really helps break up the week . . . I like that contrast, and I think that's what helps keep me motivated. And for that reason . . . I would like for it to stay like that.

In the year of the study and talking with Dr. Kalmia, he expressed that he “never [gets] a chance to really think out loud about what [his] thoughts are [about teaching], and . . . it is interesting to talk about it.”

Chapter 7: Dr. Linden: “This is what specialists do”

Educator	Gender	Race	Age	Specialty	Years in Teaching	Classroom Teaching	Teaching Full-Time
Dr. Linden	F	Asian	40-49	Specialist	9	+	-

Dr. Linden takes pride in completing and passing two specialty board examinations and describes herself as “a diagnostician and “an introvert.” She became an instructor after completing two postdoctoral specialty residency programs and states she has had “no training” in education. She has now been a dental educator for over nine years at two different dental schools and is currently the director of the specialty division. She is teaching predoctoral dental students both didactically and clinically, although her primary responsibility is diagnostic care. Dr. Linden’s scope of practice does not include dental procedures. Her teaching interactions with students largely focus on diagnosis, so she “can’t speak for their clinical dental skills.” She describes herself as an educator who is “approachable but demanding when patients are involved.”

Entry into Teaching: Private practice didn’t work out

Although Dr. Linden tutored in college, she did not teach until the second of her two residency programs, which was set in a dental school and involved teaching dental students. There, “it was only once [a week] because there is a requirement for [specialty] residency to not exceed 10% of the week doing this. That’s the only teaching [she’s] done.”

The second residency was a difficult time for Dr. Linden. About halfway through the program, she thought, “Let’s start looking [for a job]. It’s never too early, because if I get a decent job, I have something to look forward to.” She was considering positions at dental schools and opportunities in private practices. None of the private practices “felt right or worked out, so

[she] decided [she'd] try academia.” One of the dental schools “responded instantaneously. [Dr. Linden] said yes, [she] still had a year and a half to go, but they were willing to wait until [she] graduated.” After seven years of teaching at that dental school, she accepted a division director position at the current dental school.

Being a Dental Educator: “What a specialist is”

When thinking about what helps her be better at teaching, Dr. Linden reaches for others’ perspectives and experiences and finds that talking to colleagues in similar roles at different institutions, finding out what works for them and what doesn’t, and “generally talking to people” is helpful. Reflecting on what shaped how she makes teaching decisions, she thinks of two ends of the spectrum she has been exposed to as a trainee in dental school and through her two residency training programs: “what to do . . . and what definitely not to do.” She frequently refers to her mentor in her first residency, who was “friendly, approachable, and fair . . . - a complete opposite from my experience with the faculty I had in dental school. It was everything I had hoped dental school would be but wasn’t.”

As a diagnostic specialist, Dr. Linden sees one of her main tasks as educating the students on the scope and limitations of her specialty, and what a specialist can and should do. The practice of the specialty underwent a significant transformation in the last decade with the advent and growing accessibility of increasingly complex digital modalities, requiring training that is far beyond the diagnostic proficiency of a general dentist, increasing the disconnect between a general dental practitioner and a diagnostic specialist, and breeding perpetuating and frustrating misconceptions:

I think that transparency would help [students] understand my limitations or the specialty’s limitations so that they don’t have a one-tunnel vision of what a specialist is. Telling them [to] take baby steps and [not] expect that [their] speed or accuracy will be similar to people who’ve been doing this for a while. I want to share with the students

that because they are [general] clinicians, they don't have the luxury of [doing what a specialist] would and could. It's a realistic approach to sharing my experience.

Teaching Students: “Why don't you try this”

Since her tutoring days, Dr. Linden has been interspersing a fair share of “dumb jokes” into her teaching, finding that the silliness makes teaching moments more memorable. She continues to grapple with “the limits of being too friendly or approachable,” not wanting on the one hand, to perpetuate the strict, old-school ways in which she was taught, but finding on the other hand that the laid-back approach may be misinterpreted as laxity:

I want to teach with some silliness and help them remember . . . As a child, I was never taught like that - it was basically the books, studying, the exercises, very strict. I don't want to share that kind of experience with the people that I teach . . . At the same time I get frustrated because some students may likely misinterpret this laid-back approach to teaching as peer-to-peer, and “if you don't show up you don't have to tell her.” For me it's hard to find a balance between the two because I'm teaching dental students who may not have the same incentive as residents. I don't like the really firm, old-school way, but at the same time, I like to try some elements of that in order to get a handle on how students react or behave.

As a trainee, Dr. Linden appreciated those instructors who were able to foster her guided independence in gentle and non-oppressive ways as she tried out their suggestions and acted on their corrective feedback:

[The teachers I liked] gave constructive feedback, which helped me improve my weaknesses, and they kept on encouraging me to listen to the feedback and try out their suggestions. That kept me going. And the encouragement wasn't forceful or derogatory, but more of “Why don't you try this? What about this?” Because some people say statements that backfire and stunt the growth of the individual.

In her experience, having a safe space for iterative trial and error provides the learner with a more personal understanding of how to approach a problem. Taking advantage of the safe space, however, requires buy-in from the learner, and Dr. Linden's patience runs out at the lack of reciprocated engagement:

Encouraging and just having them try different things, not committing to it right away . . . gives the learner a better perspective of what actually works versus what doesn't really work. It's hard because it takes constant practice, and with some students, who I think have very little interest in [my specialty], I do tend to be more abrupt.

Dr. Linden is willing to be patient with students on very few conditions: curiosity,

diligence, and perseverance. It is the lackluster and at times even combative attitude that she finds to be a challenge to her patience and goodwill:

I don't mind if they're slower, because I know I am slow to first start to pick up anything. But if you have the right attitude to continue and to persevere, I love people like that. But if you have a very combative attitude or you're just resisting any help and not taking responsibility for that attitude, to me, you're not even trying, you just don't want to do it, and I find that very hard . . . It's frustrating when students tend to rush through things unnecessarily or they don't check for themselves. It's the attitude and the not-finding-out-for-yourself that frustrates and bothers me.

Dr. Linden thinks that her frustration at the ongoing short-staffing issues translates into the students' perception of her being "angry", but, taking pride in being a specialist, finds it reassuring that they see her as "a reliable person to go to" for diagnostic consultations. When teaching didactically, Dr. Linden actively solicits and is responsive to feedback from her students. She finds, however, that the educators "can't be too lenient": they should listen to the students' feedback but should not be "taking in everything." Dr. Linden does not perceive her clinical work with students as teaching, but as she reflects on incidents and mishaps, she attempts to break down, simplify, and clarify the workflow and what concepts "really mean" --

"something [she's] never had as a dental student" -- and has been told, "that's been appreciated."

The relationships with students get closer as the students progress from preclinical to clinical years, with increasing trust and eventually almost collegial relationships. With continued exposure to the diagnostic practice, they begin to understand that the diagnosticians are "not people demanding extraordinary stuff" and learn to appreciate the value and the purpose of Dr. Linden's repeated "pounding" of concepts into them.

The cyclical nature of the dental school curriculum requires a lot of “patience and calm,” especially with the students who are just starting their clinical years and only then begin to translate the learned concepts into clinical applications:

With every new academic year, we have to go back to the basics. [It requires] a lot of patience and understanding of what I need to be doing to these new students who just graduated from [second year] and [are] now excited to be in the clinic. They have never really worked on a patient, so true patience and calm - something I don't have right now.

Going Forward

Dr. Linden feels that she has the charge to restructure the way her specialty is represented in the dental school curriculum. She feels that the way the specialty is represented and taught in dental schools should serve to increase the general practitioners' familiarity with and appreciation of the specialty, by increasing the specialty's visibility and the time dedicated to it in the curriculum:

How do you expect a general dentist to be competent in [diagnosis] if you don't book time in the curriculum for that, and the [content] that has been taught was always focused on [what a] regular dentist can do . . . perfectly because that's their bread and butter. So, my goal is, whenever I see students in clinic, to spend at least an hour with them going over cases like that, so that they know what the red flags are, they know what common incidental findings are and how to manage them.

Longer-term, she hopes to teach postgraduate residents, who may be deeper incentivized to engage with Dr. Linden's specialist knowledge beyond the basics she teaches to dental students.

As the technological realities of the specialty practice change, the teaching specialist has “to find different ways to motivate [the students] . . . really understand where they are coming from.” Acknowledging the rapid rate of change, Dr. Linden is mindful in her teaching that “what worked for [her] when [she] was a student will not work for this generation.”

At nine years in dental academia, Dr. Linden considers herself to be an educator who still has a lot to learn. Despite the barrage of tests to her patience, be it technological malfunctions or

students looking to cut corners, it is those learners who persevere and grow in their competence and confidence who make the teaching endeavor worthwhile:

I may say that I'm still junior in terms of teaching just because I'm discovering things every moment, every day, of what I should be doing, but am not . . . Being an educator is an ongoing process of learning how to control and be more consistent with everyone. Teaching may not be for everyone. But then I think about those select students who really go by everything that you share with them. And that just reminds me that it's worth it, after all.

Chapter 8: Dr. Ivy: “Trying to be the professor that I needed”

Educator	Gender	Race	Age	Specialty	Years in Teaching	Classroom Teaching	Teaching Full-Time
Dr. Ivy	F	White	30-39	General	6	+	+

Dr. Ivy describes herself as “a dentist and teacher, as well as a wife and a mother,” and “a native New Yorker who loves food, travel, and being active.” She became a dental instructor after briefly working at a private dental office, completing a postgraduate residency in general dentistry, and three years of full-time practice at a community health center, where she “experienced teaching for the first time.” She states that “most of [her] training for teaching has come from on-the-job observation and learning.” She also participates in workshops offered by the Center for Teaching and Learning at her current institution, and by ADEA. She has now been teaching predoctoral dental students for over six years and divides her time between teaching four days a week and practicing as a dentist one day a week. As a clinical teacher, Dr. Ivy strives to “empower [her] students to work effectively and independently. [She is] always trying to strike a balance between effectively overseeing care for patient protection and allowing the students the freedom to try new procedures and get a feel for the hand skills they are practicing.”

Entry into Teaching: “My professors were happy”

Dentistry was an attractive career choice for Dr. Ivy because of the work-life balance it offered while satisfying her commitment to healthcare and skill:

Part of my impetus to becoming a dentist was the desire to be a healthcare provider who still had nights and weekends free. I love science and medicine and working with my hands, but I also like to be able to fully shut off my professional life when I am with friends and family - so dentistry seemed a great profession for me.

As a dental student, Dr. Ivy “noticed how happy [her] faculty members were.”

They seemed to genuinely enjoy teaching and one another's company . . . The professors were happy, regardless of my experiences with them. They seemed to really get along with each other. And they seemed to like what they were doing . . . It was at this time that I first considered teaching as a career within dentistry that I might want to pursue.

Shortly after graduating from dental school, Dr. Ivy joined a private dental office with one other dentist, her boss. The one-on-one dynamic was detrimental to her sense of self-efficacy: she “never felt comfortable discussing cases or asking questions in a frank manner . . . always [being] concerned with appearing ignorant or foolish [and] . . . also detested selling dentistry to patients.” Yearning for the collegiality that she experienced as a student at the dental school, she pursued a postgraduate residency and later joined a community health center as a full-time dentist, where she worked for three years.

Working with four other dentists and a hygienist on staff brought back the sense of community and opened the space for honest conversations, which was a “very welcome change” of atmosphere from “both the stuffy private office and the unmitigated chaos of residency.” The community health center was also where Dr. Ivy experienced teaching for the first time:

We had one [postgraduate] resident who would work in our clinic four days a week, and we all served as this resident's attendings. I loved teaching because it made me think critically about my own work and made me a better dentist. Additionally, helping the resident with procedures that now felt easy to me allowed me to see how far I had come with my own abilities. This was extremely gratifying early in my career.

After three years at the community health center, the intensity of the schedule and onset of burnout led Dr. Ivy to reconsider employment options. She knew something needed to change. She liked the collegiality of public health, the teaching aspect of what she had been doing, and, “remembering the easy banter between [the] professors in dental school,” decided to investigate teaching opportunities. The thought of teaching was “always percolating” in the back of her mind, partly because she is married to a teacher.

Despite her initial hesitation -- being early-career and not having research experience did not seem sufficient for a faculty position -- she applied, hoping to get a part-time job and to rebalance her workload around it. A full-time teaching position “just happened to work out,” and “it was fortunate that [the search committee] were looking for younger, more clinically oriented faculty.” Since her start at the dental school, Dr. Ivy has taken on positions that involve more leadership, at times by happenstance, and is currently a group practice leader in charge of one of four vertically integrated student teams with designated spaces, staff, and faculty.

Being an Educator

Having the resources and a sounding board to bounce ideas off of has been helpful for Dr. Ivy’s growth as an educator. Although balancing the robust patient population with a lean faculty body limits the opportunities for professional development, the chair of the department at the dental school is “very much a champion of [instructors] having the resources [they] need to grow [as teachers] . . . [and] really wants [them] to have that opportunity to grow and be the best teachers [they] can be.”

I think a lot of what has been helpful has been empowerment from [the chair] to continue doing what I was doing. I think that’s been the most helpful in clinical teaching - having that. “That’s the right thing, you need to keep doing it” or to the contrary “I understand where you’re coming from. We’re not doing this anymore.” I think having that touchpad is really good. Especially with clinical teaching.

The components of educator development that have been the most helpful for Dr. Ivy have been calibration through workshops with the education department, including general exposure to how one teaches and mentoring, and “observing other people do it . . . how they’re working with the students, and how the students react to it. . . that’s a really powerful tool.”

Dr. Ivy also frequently comes for teaching advice and ideas to her husband, a seasoned, dedicated high school teacher.

My husband does [scavenger hunts] every year with his students, and he definitely gave me feedback for some of the more fun things to put in, like “Do a pose where you propose to a stranger” and silly stuff to put in to keep students engaged. And even the idea to do a photo-driven scavenger hunt is something I had heard him do before and that’s how I came up with it.

Dr. Ivy remarks on the reciprocal relationship between teaching dentistry and doing dentistry. Even more so than with teaching the one resident at the community health center, “teaching a whole class of students reinvigorated [her] love of dentistry . . . you learn from people that are learning, also. That happened . . . when [she] started teaching dentistry, [she] became a better dentist because [she] was more thoughtful about how [she] was doing things.”

The role model dental educators she saw as a dental student were primarily clinical, and although she is not opposed to classroom work or research, she sees her task as a dental educator as “doing mainly clinical teaching and just helping students get better at it and trying to be the professor that [she] needed and that really made a difference for [her].” She sees the charge of a dental instructor as bringing “the best out in the students you’re working with,” conveying “the information and the skills as concisely as possible,” and appropriately protecting and managing the patients. “The ability to juggle those things and prioritize as needed is really important,” as is “having good judgment as a dentist.”

Do you need to have the best hand skills? Probably not. They need to be good enough to bail out a predoctoral student if they are struggling. But again, that judgment diagnostic piece is critical. That makes a big difference.

Teaching Students: “Having that space to do stuff for yourself is so powerful”

It was not just the “easy banter” and collegiality in her professors that informed Dr. Ivy’s pursuit of and approach to teaching. She recalls struggling as a dental student. Acquiring technical skills was an immense challenge, and the harsh feedback was discouraging to the point of paralysis:

I really struggled with the clinical aspect of dental school . . . Getting hand skills for me was a nightmare. I've never done anything so hard, I had never been so bad at anything. And the feedback was really harsh, which it needs to be, but at the same time, it was harsh enough that it became like I was afraid to try.

The environment changed dramatically midway through the third year of dental school, when she got to work with instructors who gave her space, for the first time, to discover who she was as a dentist:

I started working with some faculty I'd never met before and had really positive experiences with them and was given just a little more space and a little less micromanagement. I was able to be a good dentist and I was like, "Oh, I'm not the worst at this in the whole class, I can do this."

Having worked with those instructors impacted her not only as a fledgling dentist, but also as an educator:

As I started rotating through these other clinics and having more positive experiences . . . I saw how important having a good teacher was as well. And I don't know how much that informed my desire to teach, but it does definitely inform the way that I want to teach.

She feels that both negative and positive experiences, still very strong in her mind, enable her to be more "empathetic with the students and just relating to where they're coming from."

Having felt the value of student autonomy and ownership herself, she prioritizes fostering autonomy and ownership in the way she teaches, while gauging the students' confidence and preparedness, holding them accountable, and securing the vulnerable space for their learning:

For me gauging what's going to happen . . . is a lot about the preparation and the knowledge the student has going in. Allowing the student to demonstrate confidence with the patient and then have a separate vulnerable space with me is very important. I like to be able to have a frank discussion, have you read about what you're doing, how confident are you to do this by yourself, how much help do you perceive yourself needing? That's so important for me to know because I like to give students a lot of freedom.

Within the boundaries of patient safety, the immediacy of the experience, the freedom of and the ownership over patient interactions, knowledge, and performed clinical care are some of the most powerful teaching moments:

Not so much in the judgment piece or the diagnostic piece, but I like them to be able to explain what's happening to their patient themselves, I like them to establish that rapport and take more ownership of the encounter. And if they really need help, certainly, I want to help them and I don't want patients to get injured, but having that space to do stuff for yourself is so powerful and it forces you to think about things very critically. . . I really try to get them to think for themselves and be hands off, while, again, still being helpful and preventing disaster.

Discipline is the flip side of the autonomy coin. Dr. Ivy has developed a sense for attempts to bend rules but finds discipline enforcement frankly disheartening, challenging to navigate, and at times orthogonal to her image of herself as a teacher:

The hardest piece for me is the disciplinary stuff . . . trying to sort between whether things are an honest mistake or deliberate neglect, and trying to hold students accountable without crucifying people unnecessarily. And that, for me, is very challenging, and even just finding the language to have that conversation is very hard. Because I think the charge is so important to do the best you can, and these students are smart. They know when they've messed up, they know and they can say the right things. And I can have a gut feeling that that's not really what happened but there's not much for me to do there.

Not seeing herself as a disciplinarian, and not wanting to be one, places Dr. Ivy in a vulnerable position when a situation calls for discipline enforcement and undermines her sense of self-efficacy and authority:

As a teacher, I often feel that there are students that are trying to push the boundaries with me, that are trying to do the least amount of work and get away with it. I felt that less frequently when I first started. I feel like now people are trying to get away with things often. And when you're noticing it, it's hard not to take it personally and not think "Does that person think I'm stupid?" or that I'm not paying attention, or that I'm lazy. Do these students think they can walk all over me?

Under such circumstances, being perceived by the students as able to uphold the order becomes reassuring:

So, when a student says "You seem a little bit intimidating", to me that means [that] they're just trying to get away with something because they're trying to graduate. It has nothing to do with me. So that's why I was happy to hear it.

Thinking about the alignment between the autonomy that she valued being granted as a student and enforcing discipline, and learning from being a parent herself, Dr. Ivy finds accountability to be the piece that completes the puzzle:

What really made it click for me was a parenting podcast that talked about dealing with other children being mean to your child. One of the things brought up was, when the kid is out of control and has no boundaries, feel sorry for that kid, because kids need that. This is what's happening, these kids need boundaries. They need that feeling that somebody cares enough about them to hold them accountable, [it] feels good on some level. So that's what made it click for me.

She recognizes that students who are most inclined to attempt to bend rules may be the ones who are lost the most. She finds that clearly demarcating what is expected and acceptable often clarifies the students' entire trajectory, and it is these students who are most grateful to her for the hard love at the completion of dental school:

What I've noticed . . . is that at some point the students need to be held accountable, and they actually really appreciate it when you hold them accountable, even if they're not so pleased right at the beginning. The students that I actually consistently give the hardest time to are the ones that have asked me to hood them at graduation. I think when people feel like they're in free fall, and someone says, "No, this is how we're going to do this" and gives them structure, they do appreciate it.

With time and increasing authority in her current leadership position, she comes to accept that the students "are going to talk to their friends and complain about me," and hopes "that they are starting to see that I really want to hold them accountable and that I do challenge them to do things for themselves and to think for themselves."

Dr. Ivy thinks her intentions are clear to the students, and that they see her as "as someone who wants them to do things for themselves and will challenge them to do that." Her goal for her students is for them to develop self-awareness, especially in terms of their professionalism, as well as independence and a sense of good judgment. The two pieces of parting advice she has been sending to the graduating students have been about persistence and work-life balance:

One of them is “come in, do the reps, do the work. It will come, you will get better”; and the other is “You need to relax.” Sometimes you need to go and hang out with your friends and do something fun and stop doing school. And those are the two messages that I’ve been sending, which might seem contradictory.

Going Forward

Dr. Ivy feels strongly about being in a student-facing role: “I don’t want to do any job that’s not student-facing, not interested . . . I don’t want to be at a desk somewhere. That holds no interest for me.” Since her start at the dental school, Dr. Ivy has taken on positions that involve more leadership, often by happenstance and without preceding plans to take on those positions. In the past, she has struggled to articulate her long-term ambition, stating that she “kind of [likes] what [she’s] doing.”

She is currently a group practice leader in charge of one of four vertically integrated student teams with designated spaces, staff, and faculty. In addition to direct clinical teaching, group practice leaders oversee how students progress through their clinical years, ensuring that benchmark requirements of clinical training are met and that the students can demonstrate skill and competence at appropriate levels. The role involves managerial and administrative responsibilities but is “a lot more student-facing” than may have seemed. It is “more of an advisor-type role than [Dr. Ivy] had initially envisioned so [she likes] that a lot.”

At the time of writing, she was appointed to the young faculty advisory council to the Dean of the dental school. Longer-term, as she grows into leadership capacity and even departs from clinical teaching, her primary interest is in maintaining a role that is student-driven. She is content with her current role:

I feel as though the balance of my schedule between seeing my own patients, teaching in the clinic, and the semi-advisory role that comes along with the group leader position has been a really happy use of my strengths. Working with other dedicated and brilliant people has been another huge benefit of teaching. I definitely feel the sense of satisfaction that I saw in my own professors all those years ago.

Chapter 9: Cross-Case Analysis

In this chapter, I describe the themes that emerged as a result of the cross-case analysis of participant interviews and the student focus groups. The chapter is presented in two sections. The first section aims to bring out some of the commonalities and differences among the five educator stories. The second section provides a supplemental perspective on clinical dental educators' clinical teaching practice and is derived from student focus group data. Students shared their views on what made working with faculty challenging, clinical dental educator characteristics, relationships with faculty, faculty expertise, pedagogical approach, and faculty age.

Clinical Dental Educators

Several themes emerged across the five educator stories. Table 3 summarizes the commonalities and differences across five broad themes: identity, entry into teaching, community of educators, self as student, and teaching students. The table notes whether a theme emerged from a particular educator's story.

Table 3

Cross-Case Analysis of Educator Stories

Theme	Dr. Blossom	Dr. Foxglove	Dr. Kalmia	Dr. Linden	Dr. Ivy	Comments
Identity						
Dentist as primary identity	+	+	+	+	+	The educators identified as dentists who also teach, rather than primarily teachers.

Theme	Dr. Blossom	Dr. Foxglove	Dr. Kalmia	Dr. Linden	Dr. Ivy	Comments
Identity is multiple	+	+	+	+	+	The educators try on different hats as they consider themselves as teachers.
Identity is continuously reinterpreted	+	+	+	-	+	Teaching identity changes as the educators reflect on their experiences, including teaching, being taught, or practicing dentistry.
Identity is relational	+	+	+	+	+	Teaching identity emerges from interactions with students, colleagues, mentors, and family members.
Identity is contextual	+	+	+	+	+	Teaching identity is affected by the context of department, institution, and profession more broadly.
Identity is emotional	+	+	+	+	+	Teaching identity is charged with emotions, both positive and negative.
Identity is a source of agency	+	+	+	+	+	Identity, teaching or otherwise, enabled perceived action possibilities for educators.
Entry into teaching						
Deliberate pursuit of teaching career	-	+	-	-	+	A deliberate pursuit of a career in teaching is opposed to happenstance, being “forced into it”, or constraints of the job market.
Mentor guidance in career choices	+	+	-	-	-	Entry into teaching is a result of a mentor’s guidance or influence.
Community of educators						
Department collegiality	+	+	-	-	+	There is an explicit mention of the department climate and community are explicitly mentioned.
Participation in educator-led faculty development	+	-	-	-	+	The educators took advantage of the offered educator-led trainings and courses.

Theme	Dr. Blossom	Dr. Foxglove	Dr. Kalmia	Dr. Linden	Dr. Ivy	Comments
Teachers in the family	+	-	-	-	+	The educators turn to the educators in their family for teaching advice.
Institutional challenges	+	+	+	+	+	The educators discuss institutional challenges that affect their teaching: e.g., lack of calibration/ “accountability in the ranks”, staffing and scheduling challenges, lack of formal feedback.
Self as student						
Self as student	+	+	+	+	+	The educators reflected on their experiences as dental students, which informs their teaching.
Negative experience as a trainee	+	-	-	+	+	The educators experienced “how not to teach” as dental students, which informs their teaching.
Positive experience as a trainee	-	+	+	+	+	The educators experienced what it meant to have a positive experience as trainees, which informs their teaching.
Teaching students						
Value of student autonomy	-	+	+	-	+	The educators explicitly state they foster autonomy and ownership.
Value of space to explore	-	-	+	+	+	The educators explicitly state they foster the space for the students to try things out for themselves.
Value of accountability	+	+	+	+	+	The educators explicitly state the students benefit from being held accountable for their learning and actions.
Discipline as a challenge	+	-	+	+	+	The educators struggle with student negligence, cutting corners, and being “smart” about it.

Theme	Dr. Blossom	Dr. Foxglove	Dr. Kalmia	Dr. Linden	Dr. Ivy	Comments
Teaching dentistry						
Nature of dentistry	+	+	+	+	+	The educators share their beliefs on what dentistry is.
Student vs. patient	+	+	+	+	+	The educators recognize the tension between the needs of the patient and the needs of the student.
Teaching dentistry vs. doing dentistry	+	+	+	-	+	The educators elucidate a relationship between working as dentists and teaching dentistry to students.

Educator Identity

None of the clinical educators in this study identified primarily as educators; instead, they identified as dentists who also taught. It did not appear that the number of years the participants have taught or their full-time teaching status affected whether they primarily identified as a dentist. According to Dr. Ivy, when introducing herself, she always led with being a dentist, “I say I’m a dentist who teaches dentistry. So I lead with the dentistry part.” Dr. Kalmia shared that he felt that being a dentist was his full-time job, and his clinical educator role was only part-time, “[I’m] a [specialist] and a part-time attending at [dental school]. That I find is the easiest way to summarize where I am right now.” For many of these clinical educators, teaching was secondary to their role as dentists. This sentiment was also reflected in their self-assessments. Several clinical educators shared that they had limited to zero teacher training or clinical educator preparation and had not considered teaching while in dental school. All participants, however, enjoyed teaching. For Dr. Blossom, the very act of teaching kept her working at the dental school, “Now, even though I still practice, I would never want to just practice. It’s the teaching

that keeps me at [the dental school].” For Dr. Kalmia, on the other hand, the variety that teaching brought kept him motivated to continue his current trajectory:

It’s pretty challenging, but what I appreciate is that every day is different, so one day I am in practice, next day I’m teaching. It really helps break up the week. You deal with different populations - private practices have a very different population of patients compared to [dental school] patients. I like that contrast, and I think that’s what helps keep me motivated. And for that reason, my personal motivations - I like to teach, I would like for it to stay like that.

All educators tried on different hats – parent, clinician, kindergarten teacher, coach, learner, diagnostician – as they considered themselves as teachers. Throughout the three interviews and their career trajectory, many engaged in reinterpretation of their identity. Dr. Foxglove, for example, discovered the necessarily nurturing character he had to adopt as an instructor. Both Dr. Kalmia and Dr. Ivy continuously reinterpreted and refined their teaching identities through the lens of their clinical practice. Dr. Ivy gradually redefined her role as an emerging leader. Dr. Linden and Dr. Kalmia experimented with the amount of control to exercise as teachers, while Dr. Blossom moved from the idea of the educator as the one answering questions to placing the responsibility of constructing knowledge as the role of their students.

For all educators, their teaching identities were enmeshed with and affected by their interactions with students, colleagues, mentors, and family members, and by the environments of their departments, the institution, and the dental profession. For all, their teaching identity was invariably charged with an array of emotions, including enjoyment, fun, frustration, and disappointment. For all educators, their identities gave rise to perceived action possibilities: Drs. Blossom, Foxglove, and Ivy do not hesitate to ask for more professional development opportunities; Dr. Linden feels the charge to restructure the dental school curriculum; and Dr. Kalmia expresses personal motivation to continue teaching.

Entry into Teaching

Of the five participant educators, only Drs. Foxglove and Ivy deliberately pursued teaching as a career. Dr. Foxglove refers to a role model he saw in one of his young instructors, while Dr. Ivy chose to pursue teaching as an attempt to recalibrate her work-life balance and to emulate the satisfaction she has seen in her dental school professors. Interestingly, both Dr. Ivy and Dr. Foxglove arrived at teaching from having practiced dentistry in the community healthcare setting. Although Dr. Blossom entered teaching through happenstance, a mentor enabled her to follow through with the serendipitous opportunity.

Community of Educators

Although educator-led faculty development at the school is offered to all instructors regardless of their full-time status, not all pursue these opportunities. Being part of the same department, Drs. Blossom and Ivy participate in and see the value of educator-led PD and cite the support and encouragement of their department chair, who is “in tune” with education. Dr. Blossom expresses the desire for more educator-led feedback, because “there is an art to education!” Both also turn to educators in their families for educational advice. Along with them and part of the same department, Dr. Foxglove attests to its collegial spirit. However, both Dr. Blossom and Dr. Foxglove bring up a lack of calibration among faculty and “accountability within the ranks.” Dr. Kalmia cites what can be interpreted as a feedback vacuum and laments the lack of formal feedback that would have the potential to improve his teaching.

All educators cited challenges with staffing and scheduling, that invariably affect how they teach. Drs. Blossom and Ivy also comment that these issues hinder them from participating in faculty development.

Self as Student

For all five educators, their experiences as dental students inform their teaching. Interestingly, the female instructors cite toxic environments and exposure to “how not to teach.” Drs. Blossom and Linden make deliberate attempts to not teach how they were taught in dental school. Both Drs. Linden and Ivy, however, experienced the value of effective teaching and attempted to emulate the qualities and relationships of effective educators in their teaching. Drs. Foxglove and Kalmia cite positive interactions with their dental instructors, whom they emulate in their teaching.

Teaching Students

Both Drs. Kalmia and Ivy deliberately foster autonomy in their clinical teaching that is only bound by patient safety. Dr. Foxglove endorses a more “micromanagement”-like approach to clinical teaching, giving students autonomy over limited portions of patient care, but contrasts his nurturing role to handholding. Adjacently, Drs. Kalmia, Linden, and Ivy recognize the value of providing the students with the space to explore, try things out, tinker, and figure out for themselves. All instructors strive to uphold and foster students’ accountability for the care they provide for their patients, for their knowledge, and for the development of their skills. All but Dr. Foxglove, however, find managing students who evade accountability challenging. Dr. Blossom successfully employs constructivist techniques borrowed from her mother’s friend, a kindergarten teacher; Dr. Kalmia continues to calibrate his ability to perceive which students are likely to cut corners; Dr. Linden finds such situations frustrating; and Dr. Ivy finds solace in the authoritative image students have of her.

Teaching Dentistry

All educators express their beliefs on what they believe dentistry is and what is important for their students to learn about dentistry. Both Dr. Blossom and Dr. Kalmia, who dedicate more than half of their time to clinical practice, call procedural confidence and competence one of their goals for the students. Dr. Kalmia's goal for his students is confidence and competence in basic diagnosis and procedures. Dr. Blossom alludes to the meditative potential of the craftsmanship component of dentistry that she discovered while she was a dental student and expresses her desire to show her students that dentistry was fun and enjoyable. One of her goals is to simplify the process and "make it easy on ourselves." To her, "less is more in dentistry" and "it doesn't have to be that hard": "we have a hundred million tools, and you don't need it all."

On the other hand, Dr. Foxglove, who primarily teaches third-year dental students, expresses the belief that the tools and technicalities can be taught in a classroom, while the role of clinical dental instructors is to model and foster the patient-provider relationships, something that cannot be taught or demonstrated in class. Both Dr. Foxglove and Dr. Ivy, who dedicate more than half of their time to clinical teaching, express their belief that while a clinical dental instructor has to have a certain level of technical prowess to be able to teach effectively, the value of a clinical dental instructor is not in technical excellence. To Dr. Foxglove, teaching chairside manner is more valuable, "because as long as you're a dentist, you're going to know more than a dental student." Dr. Ivy believes, similarly, "Do you need to have the best hand skills? Probably not. They need to be good enough to bail out predoctoral students if they're struggling." Where the value of the dental instructor comes in, for Dr. Ivy, is the "clinical judgment piece." Both specialists, Dr. Linden and Dr. Kalmia, also hold diagnostic interpretation and judgment in high regard and expect their students to develop basic diagnostic competence.

Both Dr. Blossom and Dr. Ivy express their belief about the continuous learning inherent to dentistry. Dr. Ivy expresses it through her advice to students to “just do the reps.” Dr. Blossom positions herself as the instructor at the start of this journey: “In dentistry, the learning never stops. We teach them the basics, that’s the best we can do, and then we hope that they go on.”

All educators recognize the tension between the needs of a patient and the needs of a student and ultimately prioritize patient care and safety. The four educators involved in procedural care recognize a connection between their practice as dentists and their teaching of dentistry. Drs. Ivy and Kalmia find that teaching dentistry makes them better dentists. According to Dr. Ivy, “Teaching dentistry makes me like dentistry more.” Similarly, Dr. Kalmia shared that working as a clinical educator improved his dentistry:

I was given more responsibility as I became a faculty. I feel like I became more confident because I’m also in private practice at the same time. So as I gain more experience, I can more confidently guide clinical decisions.

Dr. Blossom finds fun and enjoyment in doing dentistry and strives to impart this joy to her students, and Dr. Foxglove prioritizes communication skills and patient rapport in his teaching as the qualities necessary for the successful practice of dentistry beyond manual skills.

Clinical Dental Educators through the Student Lens

Focus group data provided a supplemental perspective on clinical dental educators’ clinical teaching practice. Throughout three asynchronous WhatsApp focus group sessions over one academic year, eight former or current dental students, all having worked with the participant educators, shared their views on what made working with faculty challenging, the characteristics of clinical dental instructors, their relationships with faculty, faculty expertise, pedagogical approach, and faculty age. I collate the findings with the student group with the findings from educator data.

Challenges

The students in the focus group reported challenges working with faculty due to inconsistent feedback and lack of guidance. They noted that faculty members had different perspectives on dentistry. Different clinical instructors provided students with different diagnoses for patients and provided divergent perspectives on approaching patient treatment and care. Several of the students found this disagreement challenging to manage. For example, a third-year student mentioned:

...more often than I would expect, faculty don't agree on everything. I've had many cases where I'll see a patient at two different visits and work with two different faculty, and they won't agree . . . It's also particularly frustrating as a student when I prepare to do one procedure and the faculty that day tells you to do another. For me, this has often interfered with my desire and ability to complete competencies, and as someone who overly prepares for any type of appointment, has often thrown me for a loop. I understand that there is some subjectivity with dentistry, and that's part of the beauty and fun, but as a learning student with procedures to check off and competencies to complete, it gets confusing and frustrating.

However, many of the students found that after gaining more experience, they appreciated the divergent perspectives. Sharing different approaches to problems helped students learn to better handle the issues they faced in the clinic. A fourth-year student shared:

But on the clinic floor, we have many different faculty members, so the consistency wasn't there anymore. But I appreciate the different recommendations a little more now [as a fourth-year] because I have a little more experience now. Learning different options was unnerving for me last year because I wanted one 'correct' answer. But now, I want to learn what options exist to prepare for practice outside of school.

Students also reported struggling with a lack of guidance and feeling that they did not receive the amount of direction and supervision they needed to feel confident about their clinical decisions, "We're expected to do things a certain way, and it's our fault if it doesn't go as planned, even though we don't have much-structured guidance." However, students appreciated when faculty took a less hands-on approach when students were confident in the procedures they

were performing, especially as they progressed through their clinical years and gained more experience.

Although students reported several challenges in working with clinical instructors, every challenge appeared to be a double-edged sword. Divergent perspectives led to confusion early on but ultimately provided better preparation for dental practice outside of school. Similarly, the lack of guidance in the clinic was stressful for inexperienced students, but those who felt more confident in their work were grateful for the opportunity to work more independently.

These findings are reflected in the sentiments expressed by Drs. Blossom and Foxglove about the lack of calibration, or consistency in approach, among the faculty within the same department, and accountability for the variability in treatment protocols at the school at large.

Educator Characteristics

The students shared that patience and constructive criticism were positive characteristics they appreciated in clinical dental educators. One focus group participant shared that one of their favorite professors was "...very constructive in their assessment and criticism of students' work, always wanting students to improve rather than just criticize for criticism's sake." Another student shared that their favorite faculty member was patient, "There are certain faculty...who have consistently been great teachers and have shown tremendous patience when it comes to new cases in the clinic." However, students also shared that not all faculty at their university had these characteristics, "I've learned that not all faculty have the patience to teach a relatively new student, and for lack of a better word, are lazy." Positive and negative characteristics appeared to mirror one another, suggesting the importance of demonstrating patience to dental students.

Participant educators, similarly, recognized the value of patience in teaching students, particularly with the entry of third-year students with no clinical experience onto the clinic floors at the beginning of the academic year.

Relationships Between Students and Faculty

Students reported having different relationships with different faculty. The quality of relationships largely depended on the frequency of their interactions with specific faculty over time. Students found themselves repeatedly seeking help from some faculty and not others, depending on the student's preferred approach:

Over the course of the past 6 months, my relationships with some clinical faculty have been strengthened (because I have consistently gone to them), and some relationships with others have been hurt (I intentionally will not go to them no matter how short [their] line is). At this point in my experience, it's most important for me to have a mentor and teacher, and the faculty who are willing to take the time and teach, have made all the difference.

Given the choice to work with particular faculty over others, students sought out and strengthened their relationships with faculty who they perceived as patient and understanding.

All five educators remarked on the increasingly close, collegial relationships with their students as the academic year progressed. The relationships changed in quality and started involving issues beyond the practice of dentistry.

Instructors' Expertise

Students in the focus group recognized that good dentists did not necessarily make good teachers and vice versa, "...in the past, I've only recognized the good clinicians who are awful educators. More recently I've also come across good educators who are questionable clinicians (specifically rusty on the handskills)." The latter sentiment is particularly at odds with the belief expressed by several educators that technical prowess is less essential for a clinical educator than patient rapport or clinical judgment.

Students reflected on individual instructors' strengths, sharing who they believed had greater dental knowledge and why some teachers may use specific pedagogical approaches. When it came to approaches, students noted several different tactics used by teachers including by the book, hand holding, hands off, and a shifting approach. Teaching by the book referred to teachers who used a prescribed method of teaching dentistry. The response to this approach was mixed, with some students feeling this approach was utilized mainly by younger, less experienced teachers, whereas others felt that teaching by the book represented a different teaching philosophy:

I don't think them going by the book is necessarily [because] they themselves are inexperienced. I think it's because their teaching philosophy is something like when you first try a new cooking recipe, you should start by following the recipe exactly, step-by-step. Then after you try the results, you tweak it to your liking and cut or add steps as needed.

Hand-holding referred to teachers who provided a great deal of support in the clinic. Students reported appreciating the hand-holding approach during procedures they were not confident performing. A recent graduate shared:

Anytime I was performing a new procedure in dental school or residency, I much preferred to have more hand-holding the first time. There were several times that I was not given the hand-holding even though I wanted it, but the procedure turned out smoothly regardless. Looking back, I think those instructors knew my abilities more than I did myself because they were confident I would be able to figure things out on my own.

The hands-off approach described the limited guidance from the instructor in the clinic. Some students felt that this approach was standard in their university, "At [dental school] I think there is a general consensus that we're more of a kick you in the deep end and hope you swim instead of a let's start in the shallow end type school." Other students felt that only some clinical dental educators utilized the hands-off approach, and explicitly sought out those instructors in the clinic, "If I know that my procedure for the visit is simple and doesn't require a lot of oversight,

I'll usually work with a faculty that I know will let me work hands-off, which is usually a younger faculty member.”

The consensus among the focus group participants appeared to be a preference for a shifting approach, in which clinical dental educators responded to students' needs, changing their approach over time and as their relationships with students changed. Students appreciated having greater oversight when they were not confident with a procedure, but also knowing that their teachers believed in their ability to perform some procedures independently:

[One professor] is very hands off if he feels like you're competent, but he's ready to jump in if you don't feel confident. He trusts you if you demonstrate trustworthiness, if that makes sense. Because of that, I feel more confident in cavity preparations, for example. I, of course, get checks following a preparation and restoration, but [that professor] doesn't do more than look into the patient's mouth at this point if I feel like I've removed all of the caries. However, since I'm constantly lost with [a particular area], he's there to guide and share his experiences to help make my life easier and make me more confident for the next time I plan [a procedure], or something else. I feel much more comfortable talking with my faculty because I know what I know and I know what I don't know.

The shifting approach utilized aspects of the above approaches at different times to respond to students' needs in the clinic. Students appeared to appreciate each of the approaches to handling different circumstances.

Faculty Age

Lastly, students noted the influence of faculty age on clinical dental educators' pedagogical approaches and expertise. Some students felt that younger faculty took a more “by the book” approach than older faculty. Students also reported that they appreciated the laid-back attitude and tips and tricks that the more senior faculty shared. A recent graduate shared:

I feel like the younger faculty members were definitely more by the book and had a more idealized view to dentistry than the older faculty. Since most of them recently graduated their teaching style was more similar to things we learned in classes. But I felt like I learned a lot from some of the older ones and I probably even worked with them more as they were more realistic on things aren't always perfect in dentistry and were more laid

back in that sense. I feel like they also had a lot of tips and tricks in sticky situations that do come with more experience.

There appeared to be a consensus that older faculty had more dentistry experience and, therefore, more knowledge to share than younger instructors.

Educator participants, too, perceived their age as an important aspect that shaped their relationships with students. Younger faculty felt that their age was both a benefit and a drawback as it occasionally made students more comfortable approaching them and potentially made them take younger teachers less seriously. Dr. Blossom shared that she felt students felt more comfortable approaching her due to her young age:

I notice this - as the students get towards the end of their time in dental school, half of the questions they ask me are dental-related, and the other half are questions about how to run something and about work-life balance. They ask me a lot more questions about what I do with my assistant. How does the front desk work? I don't see them asking older faculty these types of questions. I think they see us as younger, and they feel more comfortable asking us these questions, and since we still practice - they tend to come to us for that information more than to other people.

On the other hand, Dr. Kalmia saw this dynamic as challenging, "I think [the trainees] see me as a colleague, to some extent, because a lot of the time I'm of similar age. I think it's a challenge as a young faculty - I'll have residents who are older than me."

Although the students did not reflect on clinical dental educators' identities, they did share insight into faculty members' approaches to clinical teaching and provided an additional perspective on clinical dental educators' teaching practice.

Chapter 10: Discussion, Implications and Conclusion

In this chapter, I summarize the findings of this study and place them in the broader context of existing literature. I then discuss the implications of this study as they pertain to clinical dental educators and make recommendations for future work.

Discussion

The purpose of this study is to paint nuanced portraits of teaching identities of five early mid-career clinical dental instructors. To do so, I ask the following overarching research question:

How do early mid-career clinical dental instructors at a private urban dental school make sense of themselves as teachers?

In particular, the sub-questions are:

1. What factors emerge from their stories about teaching as influential in shaping how they make sense of themselves as teachers?
2. How do they make sense of where they are and where they are going as educators?

Research Sub-Question 1: What factors emerge from their stories about teaching as influential in shaping how they make sense of themselves as teachers?

The educators cite several factors as influential in shaping how they make sense of themselves as teachers. Both internal (personal and emotional) and external (relational and contextual) factors rose to prominence from the participants' stories. Some of the internal factors include the self-image and perceived personal characteristics of the educators, their sense of self-efficacy, personal motivations, perceived tasks and goals as educators, and emotional components of the educator role. The external factors include relationships with the educators' colleagues, mentors, students, and family members, and the settings in which one is an educator:

from patient chairs and teaching clinics to departments within and across a dental school, to the contexts of the profession at large. These findings align with the factors influencing teacher identity outlined in education literature (e.g., Avraamidou, 2020; Beauchamp & Thomas, 2009; Day et al., 2006; Flores & Day, 2006; Rogers & Scott, 2008).

On the level of individual factors, four of the five domains of influence on clinical educators' identity formation as educators reported by Triemstra et al. (2021) were identified in the analysis: community, the culture of the institution, personality characteristics, and facilitators. In this study, the community extended beyond mentors, role models, and supportive colleagues reported by Triemstra et al. and included past teachers, students, and teachers the educators knew in their day-to-day. The culture of institution or training in this study helped the educators learn and grow as teachers, but also presented roadblocks, which they had to learn to work around. Those educators whose immediate departments encouraged their development as educators appeared to be more appreciative of the collegiality and faculty development opportunities, and they appeared to be able to better envision and enact their agency as it pertained to their educator roles.

Personal characteristics refer to self-perceptions, beliefs, and personal histories that shaped clinical educators' identities as educators (Triemstra et al., 2021), and in this study were found to range from the educators' self-perceived character traits to interests outside the classroom to past experiences. Finally, facilitators, or paths of entry into medical education, manifested in serendipitous opportunities, saying yes to encouragement from others, and deliberate pursuits of teaching as a career. Professionalization of medical education, or the evolution of medical education as a field, is the fifth domain of influence proposed by Triemstra et al. The evolution of dental education as a field, as would be relevant for this study, did not

figure prominently in the participants' stories, although the path of entry into teaching for several of the instructors was influenced by their past dental educators. Some possible explanations for this negative finding include the relatively well-established status of dental education as a profession and the invisibility of dental academia as a viable alternative to clinical practice; or the absence of explicit questions referring to professionalization in my interview guides.

Financial incentives to pursue a career in dental academia, such as student loan forgiveness programs (ADEA, 2023c), may be hypothesized to influence the paths of entry into dental education [and thus be seen as one of the "facilitators" in Triemstra et al.'s (2021) domains of influence]. Such incentives did not figure prominently in the participants' stories. Discussions of financial aspects of academic dentistry were generally limited to points of significantly lower compensation for academic jobs as opposed to private practice, in agreement with documented trends (e.g., Istrate et al., 2023; Wilson et al., 2019). A plausible explanation for the scant amount of discussion on finance is the absence of explicit questions referring to the role of compensation in my interview guides.

Research Sub-Question 2: How do clinical dental instructors make sense of where they are and where they are going as educators?

The analysis revealed the storied, multiple, and dynamic nature of clinical dental instructors' identities. The identities underwent reinterpretation, often prompted by reflection on the educators' experiences as clinicians, clinical teachers, or recipients of education advice. The identities were rooted in and influenced by the educators' relationships with students, colleagues, mentors, and family members, as well as the contexts of the teaching clinic, the department, the school, and the profession more broadly. Teaching identities also provided the educators with agency and perceived action possibilities related to their teaching roles. These characteristics of

teaching identities align with the social-relational approach to identity as an interactive process between and in relation to the social and cultural contexts (e.g., Beijaard et al., 2004; Rodgers & Scott, 2008).

Dentistry is practiced, taught, and learned through interactions, such as manual manipulation and use of tools and techniques, through explanation, demonstration, and feedback on the application of the tools and techniques, through diagnostic judgment and treatment planning, and involvement of the patient in every step of the diagnosis, treatment, and management process. Engaging in such interactions is inherent to being a clinical educator. The sense the educators make of themselves as teachers emerges from their interactions with other individuals (students, patients, colleagues, family members), in diverse settings (teaching clinics, departments, private offices), and social contexts (being learners, being parents, introducing oneself to others), as well as the very subject matter of practicing and teaching dentistry. Their sense of being a dental educator is continuously reinterpreted in light of such interactions (Blumer, 1969).

These characteristics align with the symbolic interactionist interpretation of identity, in particular the attachment of certain behaviors to the role of clinician-educator, the context-dependent salience of particular identities, or an interactional and affective commitment to them, and the influence of reflected appraisals by important others (Burke & Stets, 2009).

Kaplan and Garner (2018) identify several domains that make up a teacher's identity: ontological and epistemological beliefs, self-perceptions and definitions, purpose and goals, and perceived action possibilities. All these identity domains were noted in the data from the clinical dental educators. Importantly, the educators' identities are constantly evolving, and although

these domains contain descriptions of clinical dental educators' perceptions in the year the interviews were conducted, they should not be treated as constants.

Ontological and epistemological beliefs were truths that clinical dental educators held about dentistry and teaching. Across several of the interviews, it appeared important for the clinical dental educators to convey to students what they believed to be fundamental truths about dentistry. The beliefs the educators had about dentistry can be broadly represented as two broader ideas: (1) dentistry as a discipline at the intersection of science, art, and craftsmanship; and (2) dentistry as a patient-centric endeavor. Being a healthcare profession with a prominent visual and manual skill component, dentistry is often portrayed as a discipline at the intersection of science, art, and craftsmanship (e.g., Zahra & Dunton, 2017). This image is reflected in some of the educators' regard for diagnostic reasoning, appreciation of the intricacies of dental procedures, and repeated practice as a prerequisite for competence. The educators' belief about dentistry as a patient-centric endeavor is reflected in their ideas on duty to the patient and "the charge to do the best you can."

In addition to sharing ideas about the nature of dentistry, participants also shared their beliefs about the nature of learning. According to Kaplan and Garner (2018), beliefs such as these, which these participants treated as fundamental truths related to their practice, are important components of their educator identities.

Participants shared personal attributes about what they deemed relevant to their roles as educators. These attributes included how they defined themselves professionally and their self-perceptions of self-efficacy in teaching and dentistry. When it came to their perception of their professional selves, several shared interests, and skills that they felt were relevant to their professional identities and future plans emerged as salient.

Regarding self-efficacy, participants shared both strengths and weaknesses concerning teaching. Concerning self-perceptions, several participants shared that they believed that their age was an important factor that influenced their relationships with students. This study focused on younger faculty, who felt that their age was both a benefit and a drawback as it occasionally made students more comfortable approaching them and potentially made them take younger teachers less seriously. These findings demonstrate that educators put a great deal of consideration into their self-perceptions as clinical dental educators and consider the influence of their interests, their teaching experience, and their relationships with students when trying to conceptualize their role as teachers.

The clinical dental educators in this study endorsed several goals and approaches to being a dental educator. For several instructors, their goals were to share what they believed to be truths about the field of dentistry. Many of the participants' approaches to teaching came from their past experiences as students, and their goals were linked to their beliefs about dentistry. The purpose and goals of teaching appeared to be closely linked to clinical dental educators' experience as dental students and their ontological and epistemological beliefs.

Lastly, of the domains identified by Kaplan and Garner (2018), educators in this study also shared their perceived ideas about actions and behaviors available to them in their roles as educators. In general, although not all participants shared specific goals for their future, all the participants expressed a desire to continue with clinical education. Overall, despite not entering the field with long-term plans to pursue dental education, all the educators in this study had concluded that education was a desirable career path that they hoped to continue.

Limitations

This study has several limitations. The findings of this study rest on the stories of five clinical dental instructors of a similar age from the same institution, and its findings may not apply to other clinical dental instructors. Additionally, the responses to my request for participation were voluntary, and it is expected that those who identified more closely with being educators opted to participate in this study. However, the study provides an in-depth exploration of their experiences, suggesting that the features of clinical dental educator identity are shared by at least some dental instructors. Rather than forming generalizations, the study aimed to illustrate how early mid-career clinical dental instructors made sense of the past, present, and future of their educator identities, and to investigate what factors they recognized as influential to the (re)interpretation of these identities.

Participants in this study were asked to recount their experiences, rooting a large portion of the data in remembrances. However, I intended to engage the participants in storytelling rather than factual recollection. Beyond a historical report, storytelling is a means to get insight into the sense-making of the storyteller (Savin-Baden & Van Niekerk, 2007) and their identity (McAdams, 2008) was my intention.

The study did not include observations. Observations can be a powerful companion to interviews in narrative inquiry, often able to enrich the researcher's understanding of the phenomenon, and a tool for data triangulation (Creswell & Poth, 2019). This study could have benefitted from including observations of the educators' clinical teaching and their interactions with students, patients, and colleagues, although I was able to implement other triangulation strategies in the study design.

Finally, as a former dental student, the educator participants may not have felt comfortable discussing their experiences of being dental educators as deeply with me. While what the participants shared with me may have been limited by my positionality, I feel that the relationships I have with the educators are positive, and our relationships allowed us to engage in honest and open (re)storying of their identities. To counter my potential preconceptions, I stayed immersed in the data throughout the multiple stages of data analysis and kept a personal journal.

Implications

My findings have several implications for the practices of faculty development in dental academia. First, this study demonstrates the applicability of the principles of symbolic interactionism and sociocultural understandings of educator identity to the context of dental academia. The study paints a portrait of a dental-sociocultural educator identity that is influenced by the unique features of dentistry as a professional community and a prominently procedural discipline in healthcare. By the inherently interactional nature of dentistry as a practice, dental education is governed and carried out through an apprenticeship model according to established standards and regulations.

Second, it follows, then, that symbolic interactionist and sociocultural principles can be leveraged in the development of and research into faculty development efforts in the dental education space. For development and research of educator professional development in particular, the findings point to the potential applicability of such principles as apprenticeship and communities of practice (Lave & Wenger, 1991). Dental educators may benefit from professional development settings in which they engage in communing with other dental and non-dental educators. Early-career dental educators may benefit from access to more seasoned dental educators and educators who share their characteristics. The benefits of such engagement

may be systematically and reproducibly studied by applying symbolic interactionist and sociocultural frameworks (e.g., Kaplan & Garner, 2018).

The findings of the study suggest that dental educators benefit from being immersed in communal settings that prioritize the cultivation of strong teaching identities, and involve educator-led expertise, self-reflection, and structured feedback. The culture of the institutional setting, in particular, that which fosters the educators' self-view as educators through the availability of educational opportunities and the educator-centric philosophy, appears to strengthen clinical educators' teacher identities and encourage their agency as educators. Notably and consistent with existing research (e.g. Cantillon et al., 2019), the mere existence of faculty development opportunities does not translate into the educators' taking advantage of these opportunities. However, those educators who do participate in faculty development appreciate and express their interest in more of such opportunities. These findings are in line with those who portray a supportive community and the sense of belonging that may emerge in the context of professional development as a community of practice (Lave & Wenger, 1991), in which identities are negotiated in the presence and with others (Izadinia, 2018; Kirkby et al., 2019; Weinburgh, 2020).

Additionally, the study suggests that opportunities to reflect on teaching, in particular, may have a strong and positive influence on dental instructors' teaching identities. It may be reasonable to suggest, then, that in addition to the immersion in communal settings, opportunities to tell and retell one's story as an educator (Connelly & Clandinin, 1999) and to relive the story through reflection on oneself and others as educators, particularly in the presence of other educators, may strengthen one's educator identity. These community settings should provide the space to experiment with one's identity as an educator (Ibarra, 1999; Nesje et al., 2018). Such

settings may be beneficial not only the early-career dental instructors but also part-time instructors and retiring clinicians, who may lack structured and recurrent immersion into departmental cultures and do not always receive training for academic careers (McAndrew et al., 2018).

The study demonstrates that the educators' personal experiences, from past student-hood to current practice, and reflection on these experiences appear to strongly influence and reinforce their teaching identities, and are in line with Moore's (2008b) findings that their desire to have a specific type of teacher professional development to meet their teaching and professional needs are desired. Past student-hood, in particular, has a large impact on the educators' perception of being teachers. This finding suggests that the students' exposure to dental education as a career choice should involve more representation and visibility of young faculty, fostered teaching experiences, and explicit discussions about what it is like to teach dentistry and educators' pedagogical choices.

The study suggests that the beliefs that dental educators hold about dentistry and learning have an influence on their identities as educators. The intersection of the dental educators' beliefs about learning and dentistry may be theorized as their pedagogical content knowledge (PCK), similar to the positioning proposed in science education research (e.g., Hu, 2014; Park & Oliver, 2008; Shulman, 2014). The notion of PCK has received little attention in healthcare education in general. Lamb and Firestone (2018) call for pointed development of what they call medical pedagogical content knowledge (MDPCK): an amalgam of the skills and content knowledge developed within science education with the specific skills and content taught in healthcare. The prominence with which the beliefs about dentistry and learning are featured in

the dental educators' identities makes the case for a deliberate development of what constitutes dental pedagogical content knowledge.

Educator identities can benefit from recognition, collaboration, peer feedback, and celebration of educator successes. Finally, acknowledging and understanding the multiple nature of educator identities, such as clinicians, educators, former students, parents, or sports coaches, can and should be leveraged to increase interconnectedness and synergy of these identities; ability to draw on strengths and resources of these identities; and the educators' ability to connect with different students, colleagues, and patients, resulting in improved quality of instruction and, ultimately, health care.

Future Directions

This study can point to several promising future research and practice directions. This study focused only on a group of early mid-career clinical dental instructors. As such, including those instructors who followed the historically prevalent trajectory of “retiring into teaching”, those who just entered teaching, senior faculty members whose careers were predominantly in academia, as well as those educators who chose to leave academia, could shed additional light on the inner workings of the identities of clinical dental instructors at different stages of their careers, and the pathways to support these identities. Similarly, longitudinal studies could allow for in situ investigation of the changes in identity-focused sense-making, and the immediate and remote influences of the factors discovered to affect the teaching identity. Additionally, a study involving a more immediate engagement of educators with student perceptions could bring to prominence the reflected self-appraisal component of educator identities, and the potential to leverage it in strengthening such identities.

Future studies should investigate the influence of environments and interventions deliberately designed to foster clinical educator identities. Interventions that can be used to support educator identities include reflective practice, peer support, mentorship, and professional development (e.g., Browne et al., 2018; Moore, 2008b; van Lankveld et al., 2021).

Conclusion

Clinical educator identities of clinical dental instructors are complex, influenced by multiple personal and relational factors, but dynamic and malleable. It is important for faculty development efforts to consider this complexity. The awareness of and insight into educator identities should inform the avenues to support educators in awakening, fostering, and maintaining their identities as educators.

The study provides an in-depth insight into the identities of early mid-career clinical dental instructors and demonstrates the applicability of symbolic interactionist and sociocultural principles to research into dental faculty development, beginning to portray the dental-sociocultural understanding of a clinical dental educator identity. The study adds to the call to deliberately foster these identities through teaching identity-centric professional development.

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Appendix A: Educator Recruitment Email

Dear (NAME),

I am writing to invite you to participate in a study of clinical dental educators at (INSTITUTION). I am a doctoral student at Teachers College, Columbia University, and a recent graduate of (INSTITUTION). I am conducting this study to learn how people like yourself view themselves as educators in the teaching clinic setting.

You were selected based on a search designed to find a representative dental faculty member with over three years of clinical teaching experience. Your views are very important because they provide the best way to get a picture of how dental educators feel about themselves, and are making decisions as they move through their careers. This information may, in turn, help those who seek to understand and support the needs of faculty members like yourself.

There will be three interviews, if you choose to participate: one in July, one in January, and one in April. These interviews will ask about such matters as your past experiences, activities today, and plans for the future. Your participation is strictly confidential and entirely voluntary. The interviews can take place at a time and location that is most convenient for you -- or over Zoom, if that is something you prefer. Each interview usually lasts about 90 minutes, but the time allotted is also entirely up to you. Most people find the interviews quite enjoyable, and I hope you will, too.

I am attaching a questionnaire to this letter. Please review it to get a sense of the kinds of things we may discuss in our interviews. In the next week or so, I will reach out again to find out whether you are able to participate and, if you are ready, collect the questionnaire and arrange a good time and place to get together. If you would like to contact me before then, just give me a call at (PHONE NUMBER) or send me an email at (EMAIL ADDRESS).

Thanks so much, and I look forward to speaking with you soon!

Sincerely,
Daria Vasilyeva

Appendix B: Questionnaire

1. How would you describe who you are?

How do you introduce yourself to friends?

How do you introduce yourself professionally?

2. In which division do you teach as an instructor here at [dental school]?

How long have you been an instructor here?

What was your first year of teaching here?

What roles have you held or currently hold here at [dental school]?

Have you been a dental instructor elsewhere? If so, where, when, and what division of dentistry? What roles have you held there?

3. Have you been trained, formally or informally, to teach dentistry? If so, where?

4. In a few words, how would you describe yourself as a clinical teacher?

Appendix C: Interview Guide 1

1. Today, how would you describe who you are?

How would you introduce yourself to friends?

How do you introduce yourself professionally?
2. In which division do you teach as an instructor here at [dental school]?

How long have you been an instructor here?

What was your first year of teaching here?

Have you been a dental instructor elsewhere? If so, where, when, and what division of dentistry?
3. You have held these roles at these institutions [refer to questionnaire]. Which of these felt the most like yourself? How so?

Which of these felt misaligned with who you are? How so?
4. Have you been trained, formally or informally, to teach dentistry?

Have you taught dentistry before -- as a dental student or a postdoctoral trainee?
5. Other than dentistry, have you done any other kind of teaching, formally or informally at any time in your life? If so, can you tell me more about that? [content, setting, students...]
6. Let's go back in time to when you decided to go into teaching. Why did you decide to pursue teaching dentistry as a career? Can you think of the time when you decided to pursue teaching dentistry? Can you tell me about it? When was that? Where were you? Who was there, what was the setting, how did it make you feel?
7. When you decided to pursue teaching dentistry, what kinds of things did you imagine you would be doing as a dental instructor?

8. You have now been teaching dentistry for [this many] years. Do you feel that your ideas about what teaching dentistry means and what it looks like have changed? How so?
9. Where does being a clinical teacher fit into your life?
10. Can you think of an experience or an interaction that would help me understand how you think about clinical teaching and being a clinical teacher?
11. What aspects of teaching do you feel you are good at? What aspects of teaching do you find rewarding? Are there any aspects of teaching that you find particularly challenging?
12. Students, instructors, administrators may have different ideas about what being a good dental educator means. For you, what does being a “good dental educator” mean?
13. Thinking ahead, what kind of work would you like to be doing in the next year?
What about five to ten years from now?

Appendix D: Interview Guide 2

1. Did the way you think about being a dental instructor change? If so, how?
2. How do you make decisions about how to teach?
3. Did anything change in the way you teach? If so, how?
Have you tried anything new in the way you teach?
4. Did your relationships with students change? If so, how?
5. What are your goals for your students? What do you want your students to achieve?
6. How does a dental educator get better at being a good dental educator?
7. What did you like about the teachers you liked?

Appendix E: Interview Guide 3

1. Did the way you think about being a dental instructor change? If so, how?
2. How are your relationships with students changing as the academic year comes to an end?
3. What are your anticipations for the incoming third year students?
4. Have you tried anything new in the way you teach?
5. How do you make decisions about how to teach?
6. How does a dental educator get better at being a good dental educator?

Appendix F: Focus Group Recruitment Email

Hi (NAME),

I am writing to invite you to participate in a study of clinical dental educators at (INSTITUTION). I am a doctoral student at Teachers College, Columbia University, and a recent graduate of (INSTITUTION). I am conducting a study to learn how dental faculty members view themselves as teachers and how dental students perceive them as such.

You were selected based on your history of having worked with the faculty members in the study as a dental student. Your views are very important because they provide the best way to get a picture of how students view dental faculty, and how the views translate into the faculty's views of themselves. This information may, in turn, help those who seek to understand the needs of faculty members, support their commitment to teaching, and, as a result, improve the experiences of dental students.

The focus group will be largely asynchronous and will be held over WhatsApp (or a similar instant messaging platform) with 4-7 other current or former dental students. Three times over the next year (July, January, April), the group chat will receive prompts about such matters as your experiences at the dental school as a student and your views on clinical dental education. The chat will remain open for any thoughts you may have in between. Your participation is entirely voluntary, and the time you commit to participating is also entirely up to you. Most people find focus groups enjoyable, and I hope you will, too.

In the next week or so, I will reach out again to see whether you are able to participate. If you would like to contact me before then, just give me a call at (PHONE NUMBER) or send me an email at (EMAIL ADDRESS).

Thanks so much, and I look forward to speaking with you soon!

Sincerely,
Daria Vasilyeva
(INSTITUTION) Class of 2019

Appendix G: Focus Group Guide 1

1. Please introduce yourselves to the group: who are you and what is your relationship to [dental school]?
2. Before you started clinic, what did you anticipate your experience as clinical dental students to be?

Has your experience of being clinical dental students changed since you started clinic?

How so?

What has your experience of being clinical dental students been?

What are some highlights, positive or negative, of your experience?
3. Before you started clinic, what did you anticipate your interactions and relationships with the faculty to be?

What have your interactions and relationships been with the faculty in teaching clinics?

Are they different from what you expected? If so, how?
4. From your standpoint as clinical students, what makes a “good clinical teacher”? What makes you say so? Can you give me a few examples of that?

Appendix H: Focus Group Guide 2

1. What has your experience of being clinical dental students been?
What are some highlights, positive or negative, of your experience?
Since we last spoke a few months ago, has your experience of being clinical students changed? If so, how?
2. What have your interactions and relationships been with the faculty in teaching clinics?
Since we last spoke, has your experience of being clinical students changed? If so, how?
3. Has your impression of what makes a “good clinical teacher” changed? What makes you say so? Can you give me a few examples of that?
4. Are your relationships with clinical faculty changing? How?
5. Did your ideas/impressions/thoughts about what it means to be a good clinical teacher change? How?

Appendix I: Focus Group Guide 3

1. What has your experience of being clinical dental students been?

What are some highlights, positive or negative, of your experience?

Since we last spoke a few months ago, has your experience of being clinical students changed? If so, how?

2. What have your interactions and relationships been with the faculty in teaching clinics?

Since we last spoke, has your experience of being clinical students changed? If so, how?

3. Has your impression of what makes a “good clinical teacher” changed? What makes you say so? Can you give me a few examples of that?

4. How does a dental educator get better at being a dental educator?