Creating a culture of learning – mentoring in a PDS

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Abstract

Purpose – Professional development schools (PDSs) advocate links between schools and teacher education programs, but how do mentor teachers in schools experience their role in this? Therefore, this research focuses on mentor teachers to investigate the change brought about by the implementation of a complex-wide PDS.

Design/methodology/approach – This qualitative single case study in a newly formed complex-wide PDS is based on surveys and individual interviews with mentor teachers from one school complex area. Activity systems analysis provided the framework to analyze mentor teachers interactions, their role and activities.

Findings – Mentor teachers expressed a sense of purpose in educating the next generation of teachers, experienced continuous learning in the collaboration with the teacher candidates and recognized opportunities for professional development offered by teacher education programs.

Practical implications – Schools and teacher education institutes rely on mentor teachers in their support to educate the next generation of teachers. Knowing what activities and values mentor teachers place on their mentoring can guide school administrations and teacher education institutes in their support and recruitment for mentor teachers.

Originality/value – This research contributes to the development of teacher education in the State of Hawaii and has identified helpful structures for meaningful teacher education.

Keywords Teacher education, School–university partnership, CHAT, Mentoring, Mentor teachers, Professional development school

Paper type Research paper

The American Association of Colleges for Teacher Education (American Association of Colleges of Teacher Education, 2010) stated that real change occurs when universities and schools work together to offer teacher candidates a combination of theoretical and practical work experiences. A professional development school (PDS) is a model for teacher education that provides an agenda and guidelines for successful collaborative work relationships between schools and teacher education programs (Brindley, Field, & Lessen, 2008; National Council for Accreditation of Teacher Education, 2001). This collaboration in a PDS is foundational for professional development (Burns, Yendol-Hoppey, & Jacobs, 2015; Snow-Gerono *et al.*, 2002) and school development (Darling-Hammond & Friedlaender, 2008).

In a PDS, the teacher education program works with the schools to organize the clinical practice for teacher candidates. At the school, it is the mentor teacher who collaborates with university faculty to bring the theoretical and practical work together for the teacher candidates.

NAPDS Nine Essentials Addressed:

#3 A PDS is a context for continuous professional learning and leading for all participants, guided by need and spirit of practice of inquiry,

#2 A PDS embraces the preparation of educators through clinical practice.

Strand 1 Implementing a PDS, creating impact through the PDS

Mentor teachers shape teacher candidates' expectations for their teaching and provide a model for perspectives and practices in the teaching profession (Butler & Cuenca, 2012). Teachers who experienced a comprehensive preparation that connects them to the schools' community are more likely to stay in the profession (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Scholars see the potential for PDSs to elevate education in schools and at teacher education institutes to better serve students and prepare quality teachers (Zeichner, 2010).

Implementing change in an organization is challenging and often fails (Higgs & Rowland, 2000; Kotter, 2014). Therefore, building a culture of flexibility and developing capacity for change in an organization are seen as fundamental steps in the process of implementing organizational change (Higgs & Rowland, 2000). As Senge (2000) advised, "If you want to improve a school system, before you change the rules, look first to the ways that people think and interact together" (p. 19).

Consequently, this research focuses on mentor teachers to investigate the change brought about by the implementation of a complex-wide PDS. The concept of a complex-wide PDS is characterized by the bounding nature of a school complex in the State of Hawaii where the complex elementary schools feed directly into the complex secondary schools. In the Waiwai school complex, seven public schools (five elementary, one intermediate and one high school) have a history of collaboration with a public university's teacher education institute (CE). The concept of a complex-wide PDS was formalized, adapting the essentials provided by the National Association of Professional Development Schools (NAPDS) (Brindley et al., 2008). In Fall 2016, the CE placed teacher candidates with mentor teachers at all seven schools, implementing the complex-wide PDS. Principals, school and university faculty met regularly to develop the initiative, yet little is known about how the mentor teachers perceive this initiative and what their concept of a PDS is. The purpose of this qualitative case study is to explore mentor teachers' perceptions and interactions that advanced and supported the development of this complex-wide PDS.

Informing literature
Professional development schools (PDSs)
In the last 30 years, various teacher–training programs emerged in the US to respond to teacher shortages in high-needs and urban areas (Zeichner, 2012). The Holmes Group, a group of education school deans collaboratively working to enhance the effectiveness of teacher education, called for the need to provide teacher candidates a substantive and supportive clinical experience (Holmes Group US, 1995). They advised collaboration between schools and teacher education programs in PDSs for greater synergy of teacher education and school development (Holmes Group US, 1995). A recent publication of *2018 Teacher Prep Review* (Rickenbrode, Drake, Pomerance, & Walsh, 2018) marked two essential features of a high-quality student teaching experience: the opportunity to work with and learn from a great mentor teacher, and frequent observations by a university supervisor. The importance of practicing while teaching has grown and the clinical component is now pervasive in today's teacher preparation programs (Darling-Hammond, 2010).

In a PDS, the school and the teacher education institute work collaboratively to align educational goals and practices to support teacher candidates to develop their dispositions, knowledge and skills. These strong partnerships secure quality placements for clinical practice and contribute to the positive and successful development of teacher candidates. Many schools and universities have investigated organizational reforms to foster collaboration between teachers, principals, university faculty and administrators (Anagnostopoulos, Smith, & Basmadjian, 2007).

The collaboration between university faculty and school staff is a central aspect of the standards and essentials for PDSs (Brindley et al., 2008; National Council for Accreditation of Teacher Education, 2001). Some researchers labeled this collaboration as a hybrid space

(Ikpeze, Broikou, Hildenbrand, & Gladstone-brown, 2012; Zeichner, 2010), where members of the different institutions, schools and universities come together to form new goals and attitudes with their collaborative work. Further, the collaborative aspect of the PDS provides opportunities to form professional learning communities among teachers (Doolittle, Sudeck, & Rattigan, 2008) and guide professional development (Thomas *et al.*, 2012).

Several studies have provided examples of the variety of professional development opportunities initiated by PDS work (Cozza, 2010; Hobbs *et al.*, 1998; Thomas *et al.*, 2012). Overall, they demonstrated that PDSs offer organizational structure that provides meaningful professional development for successful student learning and teacher development.

Mentor teachers stated that the collaboration with teacher candidates increased their reflection on their teaching practice, which resulted in the mentor's personal and professional growth (Hudson, 2013). Increased mentor teacher confidence led to more teacher leadership and teachers' active participation in developing the school. Other studies reported on a master's program catered to mentor teachers who served the teacher education program; program requirements included exploratory research in teaching and supported research and inquiry-led teaching practice (Hobbs *et al.*, 1998).

Learning culture
Fundamental to the success of any organization is the individual's ability to work with others, grow, and change in his or her capacity for learning (Senge, 2012). Senge described learning as an "impulse to be generative, to expand our capabilities" (Senge, 2012, p. 288). He stressed the importance of strengthening people's capabilities, and he promoted a systemic approach in the process of reshaping routines and incorporating new practices in an organization. A successful organization is innovative and continually expands its capacity to shape its future through continuous learning. To bring change to a school one must understand the culture of the school and the culture itself must be modified to bring changes to fruition. Senge (2012) defined this discrepancy as the "Principle of Creative Tension"—the gap between the vision of where the organization wants to be and the current reality. It is in the process of working with this creative tension that an organization learns how to "use the energy it generates to move reality more reliably towards their vision" (Senge, 2012, p. 289). With this creative tension, the stimulus for change is raised to the level of intrinsic motivation and is less of a problem-solving attitude.

When considering schools as learning organizations, school culture includes teachers collaboratively working on school improvement. The term "school culture" is frequently used in educational settings to describe a workplace at a school (Hoy, 1990). The culture of a school includes its participants' shared assumptions, values, and norms that continually reinforce each other. The principal takes a key position to communicate the culture of the school as he or she manages instructional and institutional resources (Varrati, Lavine, & Turner, 2009). The culture among colleagues, how they form their relationships, the values they share, and the norms that are present in school activities all impact how learning is organized and facilitated at the school (Hipp, Huffman, Pankake, & Olivier, 2008). Productive and positive school cultures contribute to the establishment of learning communities in many ways, including providing guidance to members regarding the organization's meaning and purpose.

Mentor teachers
The National Council for Teacher Quality identified qualifications for mentoring (Greenberg, Pomerance, & Walsh, 2011). The mentor teacher should have been on the job for at least three years or should not be considered a novice teacher anymore; the mentor teacher should be

considered an effective teacher who uses teaching behaviors that are worthy of emulation; and the mentor teacher should have the skills to mentor another adult on the job. The importance of mentor teachers' levels of experience, their effectiveness in teaching and their skills in mentoring are in congruence with requirements identified by other researchers (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Dee, 2012; Valencia, Martin, Place, & Grossman, 2009).

Despite this evidence of the importance of mentoring, there is a lack of recognition for mentoring as a professional role, in addition to a lack of compensation for it (Zeichner, 2010). A common stipend of a maximum $250 is still below minimum wage considering the hours most mentor teachers spend collaborating with a teacher candidate. Mentoring is highly valued by principals, and when asked, teachers often feel obligated to take on a teacher candidate. It is a common practice to recruit mentors without any form of specific instruction or any kind of professional development (Leshem, 2014). Although mentoring is regarded as a key contribution to the success of a novice teacher, the role of mentoring is not well-defined (Jones, 2009). More so, field experience is considered an extension of university-based preparation; still, much of the responsibility falls on the mentor teacher, giving the mentor teacher the status of an expert in practice (Butler & Cuenca, 2012). Often teacher-education programs do not inform the mentor teacher about the content of the teacher candidate's course (Zeichner, 2010). This lack of guidance from teacher preparation programs often leads to ambiguity regarding the responsibilities required of a mentor teacher (Butler & Cuenca, 2012). Being a good teacher is often seen as synonymous with being a good mentor, but this is not necessarily true. This misperception contributes to the lack of role clarification and distinction between mentoring and teaching.

Mentorship programs have become more frequent in teacher education institutions since research suggested positive outcomes for teacher candidates such as improved performance, attitude, and retention (Eby, Allen, Evans, Ng, & DuBois, 2008). The authors found that mentor teacher perceptions of professional development changed for the group receiving training – they recognized the complexity of mentoring, acknowledged a professionalized role, and advocated professional development and support for mentor teachers. As a group, mentor teachers in professional development exhibited features of a community of practice. Discussions and dialogues within a mentorship program created new tools for mentoring and participants started to build a sense of identity in their role as a mentor. The author's clear implication from the study was that even though the benefits of formal mentor training were clear, there was also a need for more support for mentors at the school, such as resources and time allocated for training.

Recent years provided more research on what mentoring includes and its potential influences on teacher candidates (Butler & Cuenca, 2012; Eby *et al.*, 2008; Sayeski & Paulsen, 2012). Butler and Cuenca (2012) conceptualized the role of the mentor teacher as an instructional coach, an emotional support system, and a socializing agent. Mentors shaped teacher candidates' perspectives and practices of teaching, providing a model for how to start the school day or year, call parents, interact, collaborate with colleagues and other non-instructional responsibilities. Sayeski and Paulsen (2012) identified mentor practices that contributed to quality student teaching experiences. Favorable practices were setting aside time for one-to-one discussions, providing concrete feedback in various forms (written, verbal, modeling), providing space for experimentation and including the teacher candidate in all aspects of professional life.

Theoretical framework
The cultural-historical activity theory (CHAT) and the activity system analysis provide the theoretical framework for this research. Activity theory is used to understand human

practices that are located in social interactions (Chaiklin & Lave, 1993; Yamagata-Lynch, 2010). Activity systems are also used to capture the essence of transformation and change in an organization (Engeström, 1987; Engeström & Glaveanu, 2012).

A graphical depiction of the activity theory is shown in Figure 1. The top triangle is based on Vygotsky's mediated action triangle, the bottom adds the socio-historical aspect of the mediated action. The components of *rules, community* and *division of labor* affect how the mediated activity meets a goal. The *rules* refer to formal and informal regulations and provide guidance to the subject on how to proceed; these rules can be constraining or liberating (Engeström, 1993; Roth & Lee, 2007; Yamagata-Lynch, 2010). The *community* describes colleagues or groups of people involved in the activity, or with whom the subject identifies participating in the activity. Lastly, the *division of labor* defines the responsibilities of the group members in the activity. All components of this activity system mediate change not only for the object but also for each other component (Yamagata-Lynch, 2010). The outcome is the result of the subject's activity. This activity triangle can help to understand how collective action by social groups mediates the activity. The overarching research question is: What is the mentor teachers' perception of the complex-wide PDS? Figure 1 depicts the activity triangle and areas of investigation for this research.

Method

This qualitative research is a single case study bounded by time and the participating school complex and teacher education programs. In the beginning stage of the PDS, participants built the foundation of a shared vision and mission that sets "the stage for planning and exploring the potential for the PDS" (Neapolitan & Tunks, 2009, p. 7). The complex-wide PDS provided the social context, and this research investigated the mentor teachers' narratives concerning the PDS. Rather than contrasting the schools participating in this complex-wide PDS, this research aims to contribute to hearing the common voice of mentor teachers in this complex-wide PDS; therefore, it is a single case study.

Study context: a complex-wide professional development school
The complex-wide PDS is comprised of the teacher education institute (CE) at a public university and the Waiwai school complex. The suburban school complex consists of five elementary schools, one intermediate and one high school. It is the first school complex in Hawaii to agree in a Memorandum of Agreement to collaborate with the teacher education institute to guarantee teacher candidates a practical experience at the school. Therefore, the
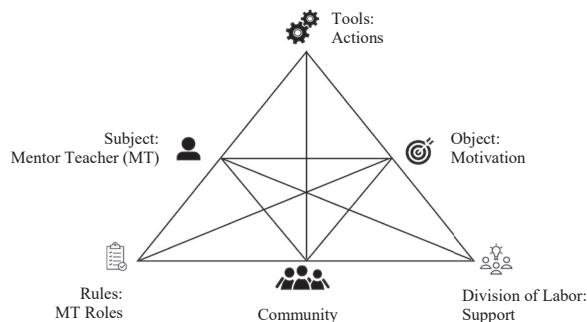
Figure 1.
Activity triangle (Leontiev, 1978; Engeström, 1987) based on the mediated triangle by Vygotsky (1978), adapted for this study

Tools:
Actions

Subject:
Mentor Teacher (MT)

Object:
Motivation

Rules:
MT Roles

Community

Division of Labor:
Support

Source(s): Authors own work

complex-wide PDS became an initiative among the schools in the complex to partake in teacher education. Noteworthy is the school complex's culture – the principals met monthly regarding initiatives in the complex to align educational programs among the elementary and secondary schools. In Spring 2018, the Waiwai schools performed the WASC accreditation as a complex, the only schools in Hawaii to do so. The schools' sizes vary from medium to large, serving a total student population of 7,900 students, with four of the schools being the largest within the grade level in the State of Hawaii.

The CE offers master and bachelor programs. Each program organizes a clinical practice with public schools on the Hawaiian Islands. Although two teacher education programs had worked with four of the seven schools, it was not until Fall 2016 that the teacher education programs collaborated on their organization of the clinical practice to learn from each other and streamline procedures. With the beginning of the complex-wide PDS, the teacher education programs requested school liaisons, appointed liaisons for the schools, organized collaborative meetings and implemented a governance structure.

Participant characteristics
The participants in this study were mentor teachers from six schools in the complex – the high school opted out of participating in the mentor survey and was not included in this study. I contacted all teachers listed at the teacher education programs who had mentored a teacher candidate since Fall 2016. Out of the 85 mentor teachers contacted, 44 replied by participating in the survey (Table 1). One of the survey questions asked about the availability for a follow-up interview, and out of the 12 responses, I was able to conduct eight one-to-one interviews with mentor teachers that represented five of the six schools. All interviews took place at the mentor teachers' school and lasted for one hour. I have given pseudonyms to mentor teachers and schools and will refer to these names in the findings as listed in Table 1.

To ensure a representation of the survey participants by the interviewees, I compared the demographic background. The two groups demonstrated similarities as shown in Figure 2. Participants were dominantly female (91% for survey participants, 87% for interviewees), graduated from the teacher education institute (64% for survey participants, 75% for interviewees), and had more than 15 years of teaching experience (50% for both groups), and mentored 1–2 teacher candidates (60% for survey participants, 75% for interviewees). The majority in the group of interview participants were classroom teachers (87%), while only half of all survey participants identified as classroom teachers (45%).

Data sources and analysis
Data were collected over the first three years of the implementation of the PDS. To address the problems of construct validity and reliability data included surveys, interviews, field notes and document analysis of schools.

School*	# Of contacted MT	Survey response (%)	MT interviews*
Kāhili	32	38	Keanu
ʻŌlena	24	58	Kate, Kira, Kristin
Lehua	9	63	Kagami, Kainoa
Pīkake	5	60	Kai
ʻOhiʻa	4	50	n/a
ʻIlima	11	46	Kalani
Total	85	52	8

Note(s): *All names are pseudonyms
Source(s): Authors' own work

Table 1.
Mentor teacher (MT) participants in the survey and interviews

Figure 2.
Demographic
background
comparing survey and
interview participants
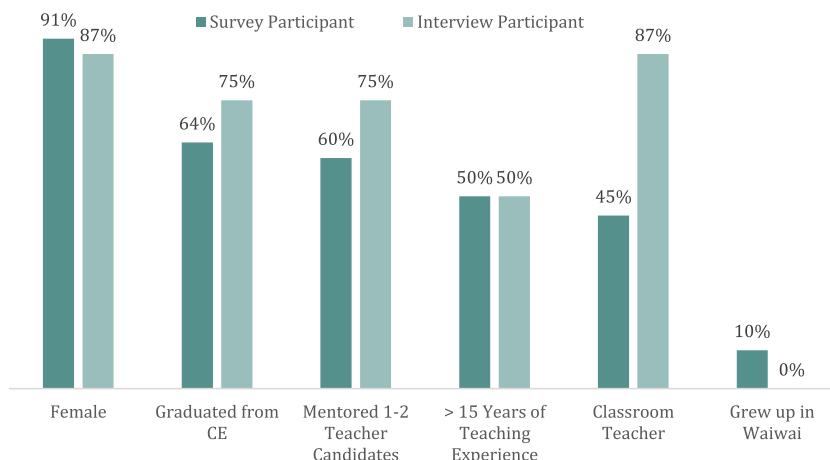
Source(s): Authors own work

The researcher used activity system analysis as a descriptive tool to capture the processes in organizational change and to identify systemic contradictions and tensions in the educational setting (Yamagata-Lynch, 2010). Data analysis unfolded in three steps. First, the researcher applied grounded theory with open and axial coding to interview transcripts to generate categories within the activity system of mentor teachers. These categories were used to code all interviews (Strauss & Corbin, 1990). For the second step, the researcher applied selective coding to generate and integrate categories. Triangulation of multiple sources of data, member checks, and the researcher's reflection on my role as a participant observer (Angrosino, 2007) confirmed and built confidence in the quality of the evidence.

Figure 3 depicts the themes in the activity system as they apply to the categories of motivation, tools, rules and division of labor.

Findings
Understanding of the PDS
One question in the mentor teacher survey was: *In three sentences or less, please describe your understanding of a PDS*. Most mentor teacher replies mentioned teachers and students, but did
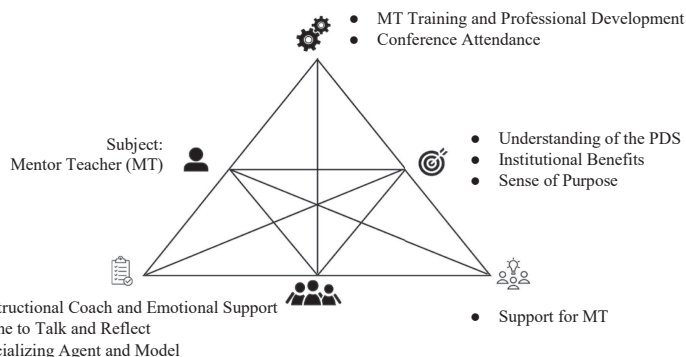

Figure 3.
Themes according to
the theoretical
framework

Source(s): Authors own work

not clarify whether they referred to college students or P-12 students, e.g. "A Professional Development School is a school that strives to continue and improve all paths of learning for teachers and students" (Survey Participant #14, 2018). The survey responses revealed that most mentor teachers lacked an understanding of the term PDS. Only 4 out of 44 survey respondents explicitly referred to the collaborative aspect between the school and the teacher education program to educate future teachers: "a collaborative effort between the [CE's] student teaching program and the schools in our complex area, to provide meaningful experiences for future teachers" (Survey Participant #25, 2018). In her interview, Kate confirmed that most mentor teachers were not aware of the "new PDS" but rather saw their role as mentor teachers as helping the teacher candidate in the classroom. She remarked, "I think I never heard it being described as a PDS, that's why my response was like, I think it is this." Keanu, another mentor teacher, emphasized the PD and defined the PDS as "where the school sends me to conferences, workshops." On the other hand, Kainoa and Kristin expressed more knowledge about the effort in the complex and described the PDS as "the schools in Waiwai are taking a more active role in providing support for the upcoming teachers by collaborating with the education department." Kristin had participated in one of the PDS conferences and Kainoa had stronger connections with a colleague who had attended one of the conferences.

Motivation: institutional benefits
Mentor teachers mentioned one advantage of the schools' involvement in teacher education as getting to know potential colleagues. For example, a mentor teacher expressed, "taking on a teacher candidate gives the school a four-month evaluation of the teacher candidate, versus a 20-min interview" (Survey Participant #4, 2018). At times mentor teachers provided principals with feedback regarding the teacher candidates and therefore took an active role in the hiring process, contributing to a strong teaching community. Keanu explained, "for the principals, they get to hire more quality, they have seen them being a part, they have been a part of the parent nights, stopped by their classroom, talked to the mentor teacher. They get that feedback."

Encouraging and allowing teacher candidates to certify as substitute teachers added to the teacher supply for the schools. Schools were able to accommodate mentor teachers' absences while the teacher candidates had additional opportunities to sharpen their skills. On a few occasions, teacher candidates were hired as long-term substitute teachers, which turned into full-time positions at the school.

Mentor teachers expressed a benefit for the school by having teacher candidates in the classroom since it "allows for more teachers (hands, eyes, and minds) in the classroom to support student growth" (Survey Participant #1, 2018). Kristin liked the opportunity to model her collaboration with the teacher candidates to her own students in the classroom. She also expressed the positive input the teacher candidates brought to the teaching staff:

> I really hope that for the school, that we will be open-minded enough to allow these teacher candidates to try all these new things they are learning and in return the veteran teachers, our existing teachers try new strategies they might be learning because I think the [CE] is more up to date with information now as opposed to all the information at the school.

The majority of the mentor teachers valued collaboration with teacher education faculty and instructors. For example, Keanu expressed in her interview that the partnership could make a positive contribution to teacher education:

> Just between the school, [our school] and [CE], so much can be done. Like, strengthen the teacher program, as we work together as far as mentor teachers, teacher candidates, as administrations, all those coordinators, field supervisors, those put together, I can see that to strengthen the teacher program.

Mentor teacher survey participants felt that hosting a teacher candidate enriched them professionally as a teacher. One participant worded this as "I have become an even stronger teacher as a result" (Survey Participant #25, 2018). Another survey participant stated, "I feel that mentoring a teacher candidate allows me to share my thoughts and gain feedback from another source" (Survey Participant #5, 2018). This was supported by the mentor teachers who were interviewed. Kai explained, "I see the mistakes they are doing, and I sit there, 'Hmm, am I doing that?' I have to reflect on my own teaching too, so that is nice."

Motivation: sense of purpose
The mentor teachers in this study took responsibility for best preparing teacher candidates for successful teaching in the classroom. This was expressed by the survey participants stating their responsibilities to "Help prepare teacher candidates for the teaching field" (Survey Participant #1, 2018). In addition, the interviewed mentor teachers liked to share their experiences and demonstrate to teacher candidates what the profession of a teacher comprised. A survey participant stated, "Candidates get a better understanding of the school and classroom environment, get a head start on classroom management strategies, and learn to form their teaching style" (Survey Participant #18, 2018). Kate advised teacher candidates, "Don't . . . stop learning. Don't be like, 'you got it,' that is how it is for the rest of your life. Teaching is continuous learning."

Mentor teachers shared a high value of mentoring in general and referred to the positive experiences of being mentored and mentoring others. The mentor teachers Kate and Kagami expressed their appreciation for the help they received from colleagues and CE faculty, while Kalani wished she had received more help and feedback from her administration. This was also echoed in the survey results, where twelve mentor teachers rated the support from the administrators as *somewhat,* while still thirty survey participants rated the support as *quite a bit* or *very much* on a five-point Likert scale. The survey responses highlighted personal benefits of mentoring as receiving help in the classroom, sharing knowledge, reflecting upon teaching practices, and seeing a sense of purpose in mentoring. One participant summed it up as, "Teaching someone else your craft really helps you to understand it more deeply" (Survey Participant #40, 2018).

Mentor teachers expressed pride regarding their involvement in teacher education. Kagami explained, "To see the next generation of teachers coming up, it is very rewarding." Kate and Kainoa kept in contact with former teacher candidates, knew about their employment status and kept relational ties. All mentor teachers referred to hiring college students who taught in their classrooms and voiced pride that principals consulted them about hiring their teacher candidates.

Tool: mentor teacher training and professional development
Several mentor teacher interviewees discussed collegial support from their peers. Keanu stated that if several teachers in one grade mentored, they could collaborate and provide feedback. At another school, Kate and Kira were doing exactly this, sharing the difficulties they had with mentoring and supporting each other in finding solutions. In the second year of the PDS, none of the schools held an official mentor meeting in addition to the orientations, but at two schools the CE faculty looked for opportunities for mentor teachers to convene. At the Complex Professional Development Summit in September 2018, CE faculty offered a workshop on mentoring.

Professional development for schools was part of the PDS; the MoA stated, "The [CE] will provide, whenever possible, professional development services at participating complex schools at the request of school personnel". This happened in the form of one-to two-hour workshops at Kāhili Elementary, ʻŌlena Elementary, Lehua Elementary, ʻIlima Intermediate, and Naupaka School, and at the Complex PD Day in Fall 2018. The content for these PDs

included language development, school–family partnerships, mentor teacher preparation and instructional techniques like co-teaching.

With the PDS, the CE developed a master's program for mentor teachers and within the third year, the first cohort of mentor teachers started their master's degree program in the Waiwai complex. This provided a support for the mentor teachers' work, leadership development and contributed to the research agenda for the PDS. Although teachers had to cover tuition expenses, the CE provided venues for scholarship applications and welcomed the Department of Education (DOE) to provide additional funding. Further, the CE collaborated with the complex to develop requirement guidelines for the master's program to address the schools' needs.

Tool: conference attendance

One of the mentor teachers, Kristen, attended a national PDS conference and spoke highly about the connections she was able to make with faculty and colleagues at the conference. She learned more about PDSs and the work at other schools in the Waiwai Complex and got inspired by her work with teacher candidates and CE supervisors. Kristin expressed her feelings about the PDS, "I really value the relationship between [the CE] and our school, because when we work together that is the bridge for the teacher candidates." Keanu, a mentor teacher, did not attend any conferences but a couple of her colleagues attended one. She recognized the good work the school did and was proud of the sharing that took place. She said:

> When you ask me what is happening, I see that collaboration between those two, CE and [the school] collaborating on what they learned, and then going to a conference for schools who have teacher programs, not only gives those participants a view of what we are doing but also strengthens, validates what we are doing.

Conference participation was one indicator of research and inquiry taking place at the Waiwai Complex. Over the first three years, mentor teachers and CE faculty presented at conferences about their work as a PDS.

Mentor teacher role: instructional coach and emotional support

The interviewed mentor teachers repeatedly voiced the perspective that the CE faculty taught teacher candidates in a theoretical setting and therefore did not provide everyday teaching practice experiences. Therefore, mentor teachers took pride in filling this gap by allowing the candidates to be part of everyday teaching experiences. Mentor teachers opened their general education classrooms, inclusion settings and special education pull-out classrooms for teacher candidates to come, watch and teach. Keanu described her role in mentoring as being "part of the pre-service teacher growth [...] giving them ideas, letting them try ideas, [. . .] offer expertise, what I learned, what works for me [. . .], but letting the [CE] student try ideas and be okay with it." Classroom management was critical for the candidates to experience in the classroom.

Kristin differentiated between two phases of instructional coaching. In the first phase, the teacher candidate observed how Kristin was teaching and co-teaching. In the second phase, teacher candidates practiced teaching parts of a lesson or whole lessons with the mentor teacher in the classroom to provide feedback. Kristin guided the candidate by listening to their ideas and working alongside them. Kagami explained how she was working with the teacher candidates:

> They make the lesson and I go like, so what are you gonna do now. . .. A lot of it is questioning, I give them questions—"So what are you going to do if this happens?" And while she is teaching, I am typing down what she is doing correct, and I write down challenges, successes.

For Kristin, mentoring included providing emotional support. She tried to see and verbalize the teacher candidate's strengths and give advice regarding teaching strategies and behavior management. She expressed that she tried to see what "they were struggling with, to help, maybe provide ideas, have the expertise—maybe if we tweak something [they] are already doing anyway, they might be a little more successful." Kristin encouraged her teacher candidates to bring in their expertise and discover their strengths, so they could overcome their struggles in teaching.

Mentor teacher role: time to talk and reflect

All interviewed mentor teachers referred positively to scheduled meetings with the teacher candidates. Meetings usually occurred after school, since time was tight during the school day. Keitha described, "We have a constant conversation, meeting after school, what we expected of them, how do they feel, what they could do better." Kate added, "It is a lot of after school to take the time to talk to them. You can talk to them during the day, but it is really fast and short and not thorough." Kainoa shared that she was willing to plan lessons with the teacher candidate in the afternoon, which extended her workday. Kai said, "We always make time. As soon as the kids are gone, we usually sat down, we talked." Two mentor teachers pointed out the importance of sharing expectations. Kalani expressed the importance of stating her expectations in the beginning to find a common ground for communication. Kate liked to brief her teacher candidate on her classroom procedures and rules to develop a shared understanding of what was going on.

Mentor teacher role: socializing agent and model

Mentoring a teacher candidate had a collaborative aspect – the reciprocal work of mentor teachers and teacher candidates contributed to the community. Mentor teachers saw value in their collaboration with the teacher candidate but also in the candidates' connections in the school. Kristin described her relationship with the teacher candidate, "So, I think putting the emphasis on building a relationship with them really helped [me] to be a good mentor to them, to be open to their ideas, to really work together. If you got a good relationship with someone that opens the line in communication so much more." Kate and Keitha had an open classroom setup and offered teacher candidates the opportunity to be part of a co-teaching setting. Their collaborative work relationship provided a model for classroom organization and highlighted the positive social aspects of co-teaching.

Kainoa pointed to the importance of teacher candidates interacting with the administration and other teachers as part of the school community. Lunch breaks allowed teacher candidates to visit with other candidates and also to experience the collaborative talk between teachers in the same grade level or among grade levels.

Division of labor: support for mentor teachers

Survey results demonstrated that mentor teachers felt well-supported by their colleagues, CE faculty members and school administrations in their work with the teacher candidates. On average, more than 27 of the 44 survey participants answered with *quite a bit* or *very much* on a five-point Likert scale for feeling supported. In interviews, the mentor teachers echoed this positive outlook – they expressed that they felt connected to their colleagues in their roles as mentor teachers. Kate and Kainoa sought advice from colleagues about their mentoring role and Kira reported having regular exchanges with another mentor teacher regarding their teacher candidates. Kagami relied on her collegial network to connect her teacher candidates to other teachers to provide teacher models closer to the candidates' ages who demonstrated a good balance of work, school and private life.

Only the support from university faculty was rated by three survey participants as *very little* and one rated it as *not at all* on a five-point Likert scale. One survey participant mentioned the lack of time for professional talk with the teacher candidate due to the mentors' school obligation "I tutor my students after school so we don't have time then either" (Survey Participants#7, 2018). At two schools, the mentor teachers did not see the principal actively involved with the teacher candidates on a day-to-day basis, but both mentor teachers stated they believed they would receive appropriate support from the principal upon request.

The anonymous survey showed overall positive feedback and perception with the PDS, only one participant rated the work situation with the teacher candidate multiple times as *very little* or *not at all*. Nevertheless, this mentor teacher voiced an appreciation for teacher candidates by stating: "Students have more help in the classroom, some candidates will do community outreach to improve our campus and the principal is able to see the candidates' work habits" (Survey Participants#7, 2018). Unfortunately, this survey participant was not available for an interview to investigate the challenges other than time.

Discussion
PDS contributed to better teacher education
The literature regarding PDS work referred to the potential of pooling resources to create a stronger link between the theoretical and practical experiences of teaching (Levine, 2002; Zeichner, 2012). A stronger discourse between the institutions helped to define common grounds for expectations and goals (Valencia *et al.*, 2009; Zeichner, Payne, & Brayko, 2015). In this study, participants agreed that the schools' involvement with teacher education was important for the profession. Mentor teachers became models for good teaching instruction and mirrored collaborative behavior to students when interacting with the teacher candidates. CE faculty provided professional development or made connections to other faculty members and supported the interests of teachers.

A PDS can promote the development for teacher education programs (Levine, 2002; Zeichner, 2012). School partners expressed their confusion with the differing requirements of various teacher education programs. They expressed a need for transparency. The implementation of the complex-wide PDS sparked conversations among the teacher education programs so that faculty members became more knowledgeable about each program's requirements and aligned them when possible.

Mentoring contributed to the learning culture
In this study, mentoring affected the cultures of the schools. This aligned with the first National Council for Accreditation of Teacher Education (2001) *standard* that PDS partners create a learning-centered community; mentors expressed their reciprocal learning with teacher candidates (Hudson, 2013). According to Senge (1990), continuous learning is a successful attribute for development within an organization. When schools are exposed to continuous change because of new policies and instructional innovations, a school can only benefit from a faculty that embraces learning and development and is open to change. Collaboration can be a strong predictor of change in teaching instructions (Parise & Spillane, 2010). For example, mentor teachers expressed their use of small group instruction because of teacher candidates in the classroom. Furthermore, research regarding successful instructional development included experimentation in the classroom and reflective practices over time (Supovitz & Turner, 2000) – both happened as expressed by the mentor teachers.

Opportunities for mentor teachers' professional development
Mentor training contributed to improving mentoring skills and therefore supported the teacher candidates (Eby *et al.*, 2008; Jones, 2009; Sayeski & Paulsen, 2012). The recruitment

for mentor teachers in the Waiwai complex-wide PDS mandated a form of mentor training. The participants in the PDS addressed this need by providing opportunities for mentor training and required clarifying expectations for mentoring. Over the first three years of the PDS, CE faculty members developed training opportunities such as orientation meetings, mentor meetings, DOE professional development credits, and a master's program to support the mentor teachers' development.

The master's degree tailored to the Waiwai mentor teachers made professional development a critical aspect of the PDS. Other studies have demonstrated the potential for staff development through professional development organized in an academic setting where the requirements involve research and inquiry (Hobbs *et al.*, 1998).

Limitations and recommendations for future studies

People willing to participate in research often have a positive attitude about the phenomenon under study. Mentor teachers participated in the PDS voluntarily and there was no direct funding involved for the PDS. I assumed that people wanted to be part of the PDS because they saw a benefit in it. Therefore, the study might be positively biased by lacking the voices of people who did not want to participate in the PDS. I did not expect to hear strong opposition to the PDS, but I tried to capture participants' skepticism and identify difficulties and challenges.

A potential limitation was that the schools varied in their depth of involvement. The schools differed in their number of teacher candidate placements; over the last three years, placements ranged from zero to more than 20, with an average of four teacher candidates per school. Two schools increased their number of mentor teachers in the first year. The schools participated differently, and the depth of involvement was not reflected in the number of participants from each school. This is a potential weakness of the study because some schools were overrepresented compared to their involvement in the PDS.

The PDS was a collaborative initiative among the schools and teacher education programs, but the most important contributions took place in the classrooms where mentor teachers worked with the teacher candidates. This fostering of mentor teachers' professional development provides a topic for future research. Whether or not graduates from the master's program contribute to the research of the PDS and develop personal motivation, mentoring skills or teacher leadership will be worth exploring.

Significance

This complex-wide PDS was shown to be a valuable structure to promote and improve teacher education. Activity systems analysis is a method to analyze human activity situated in a collective context (Engeström, 1999). Activity systems analysis helps to enhance the qualitative investigation as it provides a framework to analyze human interactions while exploring how the individual or group of individuals and their interactions directly affect their activities (Yamagata-Lynch, 2010). The theoretical framework assisted in identifying current activities and documented mentor teachers' roles in the PDS. Increased dialog among participants illuminated challenges in partnerships, and problems were seen as indicators of growth. This fostered an awareness of the partnerships and prompted a search for solutions supported by the developmental nature of the PDS (Breault, 2013; Hess-Rice, 2002). This research contributes to the development of teacher education in the State of Hawaii and has identified helpful structures for meaningful teacher education.

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