Chapter 4. Examining the complexity of the TAS teacher experience through different theoretical lenses

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Abstract This chapter will draw on and interrogate a range of theoretical approaches to examining teachers' experiences of teaching across subject boundaries. Teaching is complex work, but teaching a subject without the necessary training presents its own set of challenges, both practically in the classroom and personally for the teacher. Different theoretical perspectives highlight different aspects of the experience. Five theoretical perspectives will be explored for their emphasis on how the individual teacher is positioned in relation to their practice, themselves, and their social and cultural context. The five theoretical perspectives will include: Identity theory, TAS as Boundary Crossing, Cultural and Historical Activity Theory, Lived experience, and Communities of Practice. The chapter will use research from the authors to illustrate the explanatory power of these theories in understanding the experience of teaching across subjects.

Keywords write your keywords here

1. Introduction

This chapter will draw on and interrogate a range of theoretical approaches to examining teachers' experiences of teaching across subject boundaries.

- include international currency of the issues to be discussed (eg. How embedded or relevant is the theme/activity/theory in the countries.)
- Situate especially in relation to OOF
- Definitions

Teaching is complex work, but teaching a subject without the necessary training presents its own set of challenges, both practically in the classroom and personally for the teacher.

Different theoretical perspectives highlight different aspects of the experience. Five theoretical perspectives will be explored for their:

- emphasis on how the individual teacher is positioned in relation to their practice,
- themselves, and
- their social and cultural context.

Refer to Chapter 1 – different research relating to the teacher. Argument for focusing on the 4 theoretical lenses here.

The chapter will use research from the authors to illustrate the explanatory power of these theories in understanding the experience of teaching across subjects.

Headings level 2

2. Literature review

- What do we mean by the teacher as focus of analysis, why we would focus on the teachers, put the teacher into the centre:
- Teacher, teaching
- Categories of research that can focus on the teacher (brief intro to these)
 - Psychological categories: Teacher as... - what can be measured, snapshot and effects of snapshot, eg. Competences. Refer to Chapter 5 for a discussion about this in relation to knowledge. (brief intro) Measuring classroom , performance
 - Socio-cultural categories: Teacher in context... Argument for choosing this lens

- Post-structural category: power relations, critical lenses, allows to examine the teacher within a politically and institutionally derived system that produces, perpetuates and legitimates the OOF phenomenon. Shifts the focus from the teacher as deficit to teacher being a product of the system or institutional processes. Refer to chapter 8
- Does this belong in chapter 5 where teacher knowledge and competence is discussed.
-

Lead to chart of theoretical frameworks (includes ours plus others)?

Five theoretical perspectives on the teacher

- Identity theory (Marc),
 - Cultural and Historical Activity Theory (Fran),
 - TAS as Boundary Crossing (Linda),
 - Positioning Theory (Linda)
 - Context-Conscious Understanding Development Theory (C-CUD) (Anna).
1. Intro to theory – seminal authors, philosophy (eg. As socio-cultural), terms and constructs
 2. As applied to TOOF
 3. As applied to our research
 4. Critical analysis: strengths, weaknesses, affordances and (productive) constraints,

Boundary Crossing

1. Intro to theory – seminal authors, philosophy (eg. As socio-cultural), terms and constructs
2. As applied to TOOF
3. As applied to our research
4. Critical analysis: strengths, weaknesses, affordances and (productive) constraints,

2. Cultural and Historical Activity Theory

2.1 Intro to theory

Cultural historical activity theory (CHAT) is a conceptual framework, emanating from the work of Russian cultural-historical scholars in the 1920s and 30s, that has been applied to analysis of a range of human activity systems, including education. Vygotsky (1978, 1981; cited in Engeström, 2001) posited that human activity is object-oriented, and involves a dialectical relationship between a subject (an individual), the object (goal of action) and mediating cultural artifacts such as tools and signs. Leontjev (1981) and subsequently Engeström and colleagues (e.g., Cole & Engeström, 1993; Engeström, 1987) extended this initial focus on individual actions to encompass the collective object-oriented activity of humans in social contexts, the multiple social mediators of activity such as culturally and historically located rules, patterns of division of labour, and the wider community involved. In multiple publications (e.g., Engeström, 2001, p. 135) the collective activity system is depicted as a series of interlinked triangles (figure 1) representing the interactions between the different elements of the system, which become the focus of analysis of activity.

Figure 1: The structure of an activity system (after Engeström, 1987, p. 78)

Drawing on the work of seminal activity theorists (Cole & Engeström, 1993; Engeström, 1990, 1998, 2015; Engeström & Sannino, 2010; Leontjev, 1981), elements of the activity system in a traditional western secondary classroom might be described and exemplified as follows:

- Subject: The subject is the agent from whose perspective the activity system is being viewed. This may be the teacher, other individuals engaged

in the activity system such as a student, or groups of teachers such as the science or mathematics staff.

- Object: The object relates to the motive and purpose of the activity (Engeström and Sannino (2010, pp. 4-6)
- Tools: These are the instruments, artifacts or “cultural resources” (Engeström & Miettinen, 1999) that mediate the activity, such as textbooks, syllabuses, prior knowledge, classroom activities and forms of representation such as images and models (Engeström, 2015, p. 201; Yamagata-Lynch & Haudenschield, 2009, p. 508).
- Rules: These prescribe acceptable behaviours via formal school policies and regulations, or informal school behavioural norms, such as the “hidden curriculum” learnt by students (Engeström, 2001).
- Community: The community comprises other individuals in the activity who are involved with and share the same object, so may include the students in the classroom, the head teacher and colleagues in the staffroom.
- Division of labour: This relates to the way that the tasks, powers, responsibilities and rewards associated with the activity are distributed among the participants of the activity system (Cole & Engeström, 1993, p. 7).

The more recent third generation of CHAT theory recognizes that activity systems are interlinked, interact with and influenced by other related systems. For instance the activity system in one classroom can be influenced by activity system in another classroom through exchange of tools (e.g., teaching strategies). Interacting activity systems with a partially shared object become the units of analysis. Contradictions and tensions can occur within and between elements of activity systems (Engeström, 2015, p. 70); and, although they can be potential sources of conflict, contradictions and tensions can also act as positive drivers of learning and change as people attempt to resolve them (Cole & Engeström, 1993; Engeström, Miettinen, & Punamäki, 1999; Miettinen, Paavola, & Pohjola, 2012; Miettinen & Virkkunen, 2005).

2.2 Application of CHAT to teaching out of field

To our knowledge CHAT has not been utilised in published research into teaching-out-of-field, however its potential in this area is suggested by both the theoretical considerations of the model described above, and its application in other educational research in tertiary and school settings (reviewed by Roth & Lee, 2007). Prior research using CHAT to explore the transition to practice of beginning teachers is particularly relevant to some of the important issues in teaching out-of-field identified in this volume. For example, Engeström and Office (1994), investigated the transition of beginning teachers to the teaching profession through exploring the contradictions they encountered, and their attempts to resolve them. Similarly, Saka, Southerland, and Brooks (2009) used CHAT to explore beginning teachers’ transition into science teaching, identifying the important role played by

a supportive community of practice, and the personal and contextual influences on transitioning teachers' practices and goals. Using CHAT to explore beginning teachers' developing PCK was the subject of doctoral research by Diaz (2012), while Dubois and Luft (2014) used CHAT in their examination of professional growth in science teachers required to "float" between different classrooms.

2.3 As applied to our research

We have therefore explored the utility of CHAT in framing the experiences of secondary teachers teaching out of field in Australia. As an example, we have used CHAT to help analyse interview transcripts from Gabrielle, a young teacher in a very small rural K-12 school, mapping some of the elements and contradictions of the in- and out-of-field activity systems she experiences. The elements of the two overlapping activity systems are outlined in Figure 2.

Figure 1. Overlapping activity systems of Gabrielle teaching in and out-of-field.

While a full discussion of all the elements and contradictions is beyond the scope of this section, an example of the way CHAT illuminates contradictions and tensions relates to the community (C) that Gabrielle can draw on for support for Agriculture that is not as available for her science teaching, which she explains by way of contradictions with the community culture:

G: it is a very big agriculture community. I do rely so much on the community that they help me out so much through donating cattle and sheep. It's such a brilliant community here that they can do anything to help...

I: Is the same community support apparent for science?

G: No...I think it's the culture that's being produced here that- there are quite a few people in the community that don't, (I suppose that's probably the same everywhere) that don't really value schooling. Whereas they look at the practical subjects like agriculture and go, 'ok they are actually doing something useful.' I think that's where a lot of people's mindset lies.

2.4 Critical analysis

CHAT has attracted criticism from scholars who are working within CHAT, or in related theoretical agendas, and those who object to the dilution of CHAT's Marxist and dialectical legacy. Some of the grounds for criticism (reviewed by Engeström and Sannino (2010)) include neglect of the cultural impact of digital technologies, how CHAT relates to learners accessing knowledge that does not arise from practice, and its neglect of the individual subjective as opposed to collective activity. According to Roth (2009, p. 53) there is often an overemphasis on the structure of activity, rather than the "agentive dimensions of activity, including identity, emotion, ethics, and morality or derivative concepts, such as motivation, identification, responsibility, and solidarity", and while advocating CHAT as an important tool for researching mathematics education, Roth (2012) suggests that the triangular representation inaccurately implies activity systems as static, rather than emphasising its dynamic nature of the explanatory inner contradictions. As acknowledged by the Center for Activity Theory and Developmental Work Research (n.d.), activity theory needs to develop conceptual tools to better understand dialogue, cultural diversity, multiple perspectives and voices, and networks of interacting activity systems.

One of the main affordances of CHAT in research into TOOF appears to be the power of the framework to integrate a range of other educational concepts commonly applied to research into teaching out of field. Roth and Lee (2007, p. 188), describe CHAT as "an integrative road map for educational research and practice". Three areas of integration are outlined below as examples.

First is the conceptualisation of mediational tools in CHAT to include teachers' PCK, teaching and learning models and other aspects of teacher professional knowledge. Integrating these important aspects of TOOF within a framework that conceptually and systematically links them to other elements of teaching out of field such as support from the *community*, and the *rules* and policies that surround the *division of labour* leading to TOOF can facilitate the analysis of the complexities of TOOF.

The second potentially useful aspect of integration afforded by CHAT relates to identity – one of the key ideas in research into TOOF as outlined earlier this chap-

ter. Researchers in identity theory (Holland & Reeves, 1994) argued that CHAT could be enhanced by the incorporation of the notion of the “perspective” of subjects, while Penuel and Wertsch (1995) suggested that identity research should be conducted within local activity systems, taking into account the cultural and historical tools mediating the formation of participants’ identities. Daniels (2006) argued that the concept of identity was not well developed in CHAT, subsequently proposing that Holland’s (2001) concept of a person’s identity as fluid, multiple and historically developed within figured worlds “represents a significant development in our understanding of the concept of the “subject” in activity theory” (Daniels, 2007 p. 383).

Research by Roth and colleagues in particular has explored and utilised the nexus between identity and CHAT in educational contexts. In the introduction to an “Activity Theory and Education” Special Issue of the journal *Mind, Culture and Activity*, Roth (2004, p. 6) argues that “participation in activity entails change in life conditions and identity of the acting subject and its associated object, and this change is coextensive with changing participation and learning”. He subsequently (2007, p. 83) theorises identity in relation to an expanded articulation of CHAT, in which engagement in actions is central to developing identity. Roth et al. (2004) use CHAT to frame an exploration of the changing identities of beginning science teacher, an experienced science teacher after moving to a new school and a student. In this account he argues that:

To understand identity, we must consider the tools, object, community, rules, and division of labor associated with the primary activity system. We also must consider other activity systems the individual is and has been involved in and take into account those activity systems (distributed over space and time) in which others from the primary activity system are involved. (Roth et al., 2004, p. 68).

To return to our example, Gabrielle’s OOF and in-field teaching can be linked by the shared generalized object (O) of “giving everybody a chance”, which is a strong part of Gabrielle’s identity: *“I’m passionate about, my one thing is to give everybody a chance. That’s what I’m about.”* In her OOF area, Gabrielle’s more specific object of science learning contradicts with this more general object or passion, which is much more coherent with the tools and rules associated with her teaching of agriculture in a very strongly agriculturally-focused wider community: *G: I think that I’m there to teach the kids but mostly more about valuable life skills. So trying to get them, I always sort of focus more on the agriculture side of things, to give them an awareness and sort of just an appreciation and to develop some of those skills, that if they do step out into the Ag field and they’d be more than capable and comfortable. Whereas my view for science, I see that I’m there to teach them what they need to know. All the same skills but ... especially for junior [science], the skills I teach them now, I don’t really feel will help them as much in future science life.*

The third affordance of CHAT is its integration of the concepts of boundaries and boundary crossing, which have informed the Boundaries Between Fields Model of Hobbs (2012, 2013) in theorizing and responding to the out-of-field phenomenon. In their review of boundary crossing and boundary objects, Akkerman and Bakker (2011) acknowledge these concepts as explicit components of CHAT, which carry strong potential for learning. More specifically, the boundary objects described by Star (1989) were conceptualised by Engstrom (1990, p. 189) as ‘types of communal intellectual tools’ mediating activity. Engeström, Engeström, and Kärkkäinen (1995) explored and described the processes and mediating tools that were involved in boundary crossings between two teams of teachers planning and implementing new curriculum. They described the process of a subject moving between two activity systems as a form of boundary crossing (p. 321) requiring the development of new mediating conceptual tools (p. 323), and described shared mental models as boundary objects (p. 322). CHAT has also been used to enhance coordination and communication between different healthcare providers through “Boundary Crossing Laboratories” designed to resolve contradictions between the activity systems (Engeström, 2001). Subsequent research using activity theory (reviewed by Engeström & Sannino, 2010) has incorporated notions of boundary crossings and objects in a variety of learning contexts.

Finally, one of the strengths of CHAT resulting from these affordances is its potential in generating solutions to problems in practice. CHAT acts as a “conceptual map” (Cole & Engeström, 1993, p. 8) that can be used to trace and facilitate learning and change (expansion) by analysing the formation and resolution of contradictions (Engeström et al., 1999, p. 33; see e.g., Roth & Tobin, 2004). Joint systematic analysis of problems in practice can help practitioners master the learning demands of workplaces (e.g., Engeström, 1999), and this has been an explicit focus of much CHAT research activity (Center for Activity Theory and Developmental Work Research, n.d.). CHAT can potentially frame professional discussions among the school community around the complexities of out-of-field teaching, helping teachers to identify and work towards resolution of contradictions and tensions as they cross the boundaries between their in and out of field areas.

3. Context-Conscious Understanding Development theory (C-CUD theory): Critically analyse the lived experiences of out-of-field teachers.

Anna Elizabeth du Plessis

3.1 Introduction to the C-CUD Theory

Critical analysis of the “life-world” of people necessitates discretion, compassion and understanding. The need to have a theoretical frame that appreciates and acknowledges the impact of context-conscious understanding motivates a bold and innovative stance to create a theory that will provide support and access to a Context-Conscious Understanding Development theory (C-CUD theory) (Du Plessis, forthcoming 2018). This theory conceptualises deeper levels of understanding with strong alignment between contextual factors and epistemological awareness. The Context-Conscious Understanding Development theory (C-CUD theory) acknowledges the impact contextual factors have on lived experiences and is deeply embedded in Vygotsky’s (1978) sociocultural learning theory, Gadamer’s (1975, 1976) hermeneutic philosophy of deep understanding through linguistic expressions and Van Manen’s (1977, 1990) lived experience and reflexivity theory. The C-CUD theory supports development of an in-depth understanding of “real-life” experiences and the influence these experiences have on individuals who are expected to manage, use initiative and lead in the specific space they function.

Acknowledging Vygotsky and Gadamer’s different theoretical assumptions and developing a theory that offers support for the investigation of the long tradition, culture and common practice of assigning teachers to out-of-field positions while their lived experiences are often taken for granted and misunderstood, calls for bold innovative theoretical framing of this research. The innovative theoretical framework is exceptional and provides sound support in the current research of the out-of-field phenomenon which is critical for delivering comprehensive research about out-of-field teaching practices while using a new lens towards deeper understanding. The C-CUD theory opens possibilities for focussing on the human experiences in order to unveil their truths within a specific context (Du Plessis, 2018). Teachers in out-of-field positions have to manage their lived experiences that link to their feelings and experiences of incapacity to act with confidence as the knowledgeable other in the teaching and learning space. These lived experiences and what it means for the teaching and learning space have been, up to now, overlooked by educational and school leaders. The C-CUD theoretical approach is a suitable method to uncover the “life-world” of teachers assigned to out-of-field positions (Du Plessis, 2018).

This theoretical framework discloses misunderstandings and misconceptions about the implications out-of-field teaching practices have for quality education. The innovative theoretical framing aims to investigate the meaning of the out-of-field phenomenon at a deeper level while it underscores why it needs to be investigated and how we could construct a better understanding of the impact this multilayered phenomenon has on quality

teaching and learning. Three powerful theories, the social-constructivist theory of Vygotsky (1978) to argue the complex learning and teaching environment that develops as a consequence of out-of-field teaching and Gadamer's (1975, 1976) hermeneutic philosophy to support a deeper understanding of Van Manen's (1990, 1977) complex lived experience theory are linked to the out-of-field phenomenon. The multilayered complexities of the out-of-field phenomenon cannot be investigated in isolation as they are intertwined with contextual factors, epistemological experiences and expectations for quality teaching in classrooms. The theoretical framing provides an underpinning to search for the "truth" in relation to out-of-field teaching practices and the 'lived meaning that out-of-field teaching has for the teaching and learning environment' (Du Plessis, 2014, p. 15-16). Combining Vygotsky, Gadamer and Van Manen in a bold frame underlines the extreme care researchers need to take when investigating a phenomenon that involves sensitive lived experiences with implications for the environment in which individuals function. The C-CUD theoretical framing makes it possible to acknowledge the human experience while staying focused on the fundamentals and core issues that develop as a result of this specific phenomenon (Du Plessis, 2018).

3.2 Application of the C-CUD Theory to the out-of-field phenomenon

The search to understand the meaning that this phenomenon has for teachers is directed through Gadamer's (1975) hermeneutic philosophy to "understand the whole in terms of the detail and the detail in terms of the whole" (p. 258) and to explain the culture that underpins the out-of-field "thing" (p. 414) as out-of-field teachers' truths. The hermeneutic circle explained by Gadamer (1975) encourages observation of the culture, beliefs and history surrounding out-of-field teaching practices in schools in its totality. It however, underlines specific "parts" of the whole experience to develop a clearer and deeper understanding of lived experiences. A hermeneutic mindfulness is attentive to the "newness" that is offered through reflections on personal perceptions and understandings (Gadamer, 1975, p. 238). Gadamer's theory (1975) directs the search for "what" needs to be understood about the out-of-field experience while Van Manen (1977;1990) guides understanding in terms of "how" the phenomenon impacts teachers.

The Vygotskian theory (1978) of the knowledgeable other effectively aligns the impact teachers' content knowledge (CK), pedagogical content knowledge (PCK) and pedagogical knowledge (PK) play in prior and new concepts, described as the "zone of proximal development" (ZPD). Reflecting on this theory will clarify "why" there should be an urgency to un-

derstand the implications of the out-of-field phenomenon for quality education and quality teaching. A discussion of the phenomenological philosophy of Gadamer (1976) explains how different lenses and the use of specific verbal and non-verbal language supports researchers in looking deeper into the hermeneutic experiences, which greatly impact the teaching and learning space, in relation to out-of-field teaching. Gadamer's hermeneutic philosophy emphasises how language supports an understanding of the complex human "life-world" (Regan, 2012) and is fundamental in understanding the implications of the out-of-field phenomenon. Understanding depends on verbal and non-verbal communication; these linguistics reveal what there is to understand. Interpreting participants' 'language' about their lived experience makes this communication hermeneutical. Hermeneutics is a real-world philosophy that defends the view that truth is not reliant on scientific approaches for it to be discovered and that information is positioned in the history of the specific phenomenon.

Figure 1. C-CUD Theoretical framing to understand out-of-field teaching experiences (Du Plessis, 2018)

Participants need to explain how the nature of "the thing", in this case the out-of-field phenomenon, and how it impacts the essence of life-world and understanding (Regan, 2012). Gadamer's hermeneutic philosophy further claims that "Someone who understands is always already drawn into an event through which meaning asserts itself" (Gadamer, 1975, p. 446). The C-CUD theory adopted Gadamer's (1975, 1976) interpretation of understanding embedded in listening with a difference, observing, testing

through different lenses, reflecting and searching from different positions to express meaning through the language offered by participants. This theoretical account of concerned understanding through language involves a “fusion of horizons” (Gadamer, 1976, p. xix), an ontological focus and a pre-understanding of the phenomenon under investigation (Vessey, 2007).

Gadamer’s view of “being-in-the-world” with others stimulates the development of an in-depth understanding of out-of-field teachers’ specific needs and how they experience collaboration (Brewer, 2005). Ontological consideration, focusing on the life experiences within a participant’s world, draws Gadamer’s attention because of the “capacity to not only interpret human understanding but misunderstanding as a mechanism for effective communication” (Regan, 2012, p. 288). The philosophical belief in ontological understanding leads to the innovative and bold development of the Context-Conscious Understanding Development theory (C-CUD theory), a theoretical framework that emphasises discovery of meaning in context.

3.2.1 “How” is the impact of the out-of-field issue linked to specific situations? Lave and Wenger

Critical reflection on specific context, experiences and situations is often absent. The connectedness to specific context as a fundamental theoretical stance allows for the exploration of a wide range of perspectives and interpretations in the field (Boudah, 2011). Specific context in the search for out-of-field teachers’ truths acknowledges the social interdependence of teachers and their students in classrooms while at the same time realising the impact that these teachers have on the actions of their students (Johnson & Johnson, 2009).

The C-CUD theoretical approach supports an in-depth understanding of the situated influence of the out-of-field phenomenon and how it impacts teachers lived meaning of being a teacher. The issue of out-of-field teaching practices is not isolated from the specific situation or circumstances in which it occurs. A clear understanding of the link between the out-of-field phenomenon and its situatedness will improve the effective management of the phenomenon through targeted support. Analysis of the phenomenon and its embeddedness in teachers’ specific situations and context offers a theoretical framing for deeper understanding of these teachers’ life-world, unique situations, contexts, and needs teachers themselves might not be conscious of or notice (Van Manen, 1990; Lavery, 2003; Lave & Wenger, 1990; 1991). Noteworthy, an in-depth reflection on teachers’ specific contexts, experiences and situations is often absent when decisions are made about teachers’ placements, support or teacher performance assessment processes.

3.2.2 “Where” do the implications of the out-of-field phenomenon impact teachers and therefore effective teaching? Van Manen

A hermeneutic philosophy aims “to let things speak for themselves” through a descriptive approach and accepts that “lived experiences are always already meaningfully experienced” when they are interpreted (Van Manen, 1990, p. 180–181). The C-CUD theoretical approach sought to understand the lived meaning of “being part of the out-of-field situation” in such depth that it reveals what participants themselves might not be aware of (Van Manen, 1990; Lavery, 2003). The themes that emerged through a C-CUD theoretical framed investigation form “insightful invention, discovery and disclosure” while supporting the construction of new meaning (Van Manen, 1990, p. 88). Identification of recurring themes unwraps the “needfulness and desire” (p. 88) within the teaching and learning context to make sense of lived experiences in relation to out-of-field teaching practices. The specific theoretical framework supports in-depth conversations through which information emerges about the “life-world” of out-of-field teachers “as we immediately experience it pre-reflectively” (Van Manen, 1990, p. 9).

3.2.3 “Why” is Understanding Important? Vygotsky

Conceptualising the theoretical framework to address question about “why” it is necessary to develop a deeper understanding support the construction of knowledge in relation to the out-of-field phenomenon. Focus on Vygotsky’s (1978) theories about the more knowledgeable other (MKO) and the zone of proximal development (ZPD) accentuates the impact of CK, PCK and PK as well as the impact its absence has on the teaching and learning environment. Vygotsky’s social-cultural constructivist theory provides an instrument that facilitates an in-depth understanding of why out-of-field experiences impact the teaching and learning environment.

The significance of confident social interaction in the teaching and learning space is underlined in the C-CUD theoretical framing (Du Plessis, 2018). The implications of experiences within the learning and teaching community for the development of students and how effectively they construct meaning (Vygotsky, 1978) should not be underestimated. The culture within the learning environment effects cognitive progress (Vygotsky, 1978). The sociocultural interface of students with a knowledgeable other guides and grows healthy learning dispositions and habits (Vygotsky). Vygotsky’s theory underlines the impact of expertise in guiding the construction of new knowledge while accentuating the scaffolding of prior and new knowledge. The “why” in understanding the phenomenon involves

acknowledgement of the place that expertise has in ensuring that students internalise new, unfamiliar knowledge and what happens in the teaching and learning environment when the teacher is not the knowledgeable other. The language of what happens in the classroom impacts internalisation of new knowledge. The culture, atmosphere, traditions and beliefs practiced in classrooms influences the smooth transitions between prior acquired knowledge and newly constructed knowledge to internalise new concepts.

3.2.4 *“What” is there to Understand? Gadamer*

Hermeneutic phenomenology as a philosophy evolved from the theories of Husserl (Zahavi, 2003) on the essence of consciousness and Heidegger's (1962) theories which involve the ontological principle. The philosophical beliefs for the development of the C-CUD theory is to open the field for an in-depth connection with the participants in their “real life-world”, in their context and in the “space” where their lived experiences take place (Du Plessis, 2018), based on Gadamer's hermeneutics (1976). The C-CUD theory frames an investigation as ontological, making use of close conversations and continuous interaction, formal and informal, with participants to develop a fuller understanding as “in linguistic communication, the world is disclosed” (Gadamer, 1975, p. 404). Husserl's notion of the “life-world” defines object and subject as interconnected through the subject's lived experience, while Heidegger (1962) explained that “the being-there” (p. 182) of Dasein (the truth) is “being in the world” (p. 174). The argument then focus on how being assigned to out-of-field teaching practices impact teachers' sense of belongingness, not only in these specific fields but also in the teaching profession.

Out-of-field teachers influence the life-world of the people they encounter – parents, students, colleagues and the wider community – but, in turn, are influenced by the “world” in which they live (Schutz & Luckmann, 1973). Bourdieu (1979) records that habitus encompasses embodied dispositions that define how an individual perceives their world, performs in this space and adjusts to it according to specific challenges. The C-CUD theoretical framing underlines the influence of embodied experiences and specific context on dispositions within the teaching and learning environment. Sharing their understanding during interviews, participants reflect on the relationship between “being” and “their truth” in terms of their out-of-field context. Bourdieu (1990) emphasised how meaning making and “habitus” influence social viewpoints. Out-of-field teachers' experiences of “belongingness” (Gadamer, 1975, p. 416) to the specific context in which they function informs a better understanding of the phenomenon.

The embodied knowing that binds the experience and the person in union (Dall'Alba & Barnacle, 2005) has relevant meaning for investigating a

multilayered phenomenon such as the out-of-field situation. Targeted dialogue develops and mediates understanding through stimulating interest to conceptualise “taken for granted” experiences of everyday life (Barnacle, 2001) and what underpins these “taken-for-granted” dispositions. In agreement with Gadamer’s (1975) philosophy, respondents are perceived as a part of a larger community, culture, history and context. Respondents do not function in isolation. Gadamer constructed his notion of the individual, drawn from Heidegger’s view, as always being a person-in-community with a past or tradition. He further suggested that analysis of the human experience should take this into consideration: “There are no eternal truths. Truth is the revealedness of being that is given with the historical nature of there-being” (p. 479). The development of the C-CUD theoretical frame is deeply embedded in a Gadamerian notion that practical wisdom involves self-understanding within the situation of practice while distance from the practice “can induce a distortion” (Grondin’s 2002, p. 5). Gadamer further defines practical wisdom as the understanding that develops through the fusion of different horizons (Gadamer, 1975). Vested in Husserl’s theories (Zahavi, 2003) of the “horizon” of experiences that hovers between what is real or concrete and what is seen as the ideal or the abstract ideas of people, the C-CUD theoretical framework finds validity in Gadamer’s theory of “the fusion of horizons” (Gadamer, 1975, 1976, p. xix). His “fusion of horizons” theory (1975) claimed “to interpret means precisely to use one’s own preconceptions so that the meaning of the text can really be made to speak for us” (p. 358).

The “fusion of horizons” philosophy uncovers the voice and agency of different participants to offer a deep understanding of “being” (Gadamer, 1975, p. 432). The mediation of understanding is interwoven with specific circumstances and “the self” (Gadamer, 1976). Gadamer’s (1975) hermeneutic approach is a cognizant fusion of the position of the interpreter and the data being inferred.

3.3 C-CUD Theory applied to the out of field phenomenon

The C-CUD theoretical framework offers explanation, understanding and several acts of clarification (“fusion of horizons”) as described by Gadamer (1975). The interpretation of the verbal and non-verbal interaction and communication reveals rich clusters of meaning identified from data to expose the essential nature of the lived experience (Van Manen, 1990). A beginning teacher shared how the specific situation, circumstances and context in which she find herself assigned to teach a subject outside her field of qualification and expertise impacted her lived experience as a teacher as well as her self-esteem beyond the classroom walls:

I am a disaster, I am pathetic, I sit behind my desk the whole day, I have no friends and no time for my family. I feel worthless in everything I do.

3.4 Critical analysis

A context-conscious understanding of data depends on a trust relationship between the interpreter and the interpreted, displaying awareness of preconceptions within a specific historical time and context in order to expose beliefs and build new knowledge about the meanings of specific actions (Maggs-Rapport, 2001). Awareness of tradition and historical time advances an in-depth understanding of the meaning of diverse contexts and validates the data gathered.

Gadamer's hermeneutic circle, where the whole can be clarified by smaller, specific incidences against the background of cultural, historical and literary context, supports looking beyond common practices and taken-for-granted attitudes. Interpretive and reflexive analysis acknowledges that personal context conditions have implications for the research approach. Gadamer (1975, p. 238) described interpretive analysis, in agreement with Heidegger (1999) as "A hermeneutical trained mind must be, from the start, sensitive to the text's quality of newness – sensitivity involves neither neutrality – nor the extinction of one's self but the conscious assimilation of one's own fore-meanings and prejudices". The analysis process includes investigating and re-examining accounts to find discernments through analysis of the participants' accounts, while the context of the participants' story is the emphasis of the hermeneutic circle (Annells, 2006; Crist & Tanner, 2003).

3.5 Summary

Focusing on the whole and respecting the parts (Gadamer, 1975) underpins the value of Vygotsky's (1978) social constructivist theory for understanding the meaning that the out-of-field phenomenon has for classroom context. The theoretical framing allows for a holistic view of the out-of-field experience while affording researchers opportunities to "get close" to valuable data in the field (Berg, 2004; Cohen, Manion, & Morrison, 2011; Ladson-Billings & Donnor, 2005). The theoretical framing stimulates a view of the phenomenon as "the thing" to be understood through different participants. The conceptual framework imparts new understanding about

the interrelation between out-of-field experiences and effectiveness in classrooms and schools in contextual factors.

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Synthesis, key insights, new knowledge

- cultural constraints in application of the theory (eg. Lived experience not as relevant for German context),
- Model for Focus of OOF teacher from a socio-cultural perspective enabling understanding of the teacher within their context, and how to do research on this.

3. Implications/recommendations for practice, policy, research internationally

How these theories (and categories above) are applied in research about the teacher is internationally dependent. Description of the way teacher-focused research is often done in each country:

Germany

Australia

This is general, but influences the way research into TOOF is done in each country

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