

Understanding ESL Preservice Teachers' Metaphorical Epistemology in the Teaching Practicum Context

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Abstract

This study examined twenty English as Second Language (ESL) preservice teachers' learning-to-teach experiences amid teaching practicums from the perspectives of social realist theory and practice architectures in the USA. Utilizing iterative discourse analysis and constant-comparative approach, this paper reveals four aspects of the participants' metaphorical epistemology. First, the participants developed the constructivist metaphorical epistemology on ESL teaching by grappling with emergent properties and practice architectures. Second, the participants' metaphorical epistemology changed from surface reflection to pedagogical reflection. In addition, the participants modeled the reflective disposition by activating their personal emergent properties and tackling the social-political arrangements. Lastly, the participants' metaphorical epistemology predominantly focuses on their pedagogical reasoning and negotiation of their multiple professional identities. Implications for facilitating ESL preservice teachers' metaphorical epistemologies in the teaching practicum context are discussed.

Keywords: metaphorical epistemology, teaching practicum, social realist theory, practice architectures

1. Introduction

Researchers unanimously recognize the contributions of teaching practicums to prospective teachers' development of reflective practice and professional identity (Çakmak & Gunduz, 2018; Mifsud, 2018; Zhu & Zhu, 2018). Developing teachers' professional identities through metaphors is a dynamic, multi-faceted, and social-mediated process (Thomas & Beauchamp, 2011). In the teaching practicum context, prospective teachers elucidate their epistemological beliefs via metaphors (Lynch & Fisher-Ari, 2017), which provide alternative routes to understand their professional learning, reflection, pedagogy refinement, and identity positioning (Zhu & Chen, 2022). Accordingly, metaphoric epistemology gives preservice teachers an alternative avenue to elaborate on their nuanced perceptions of beliefs, disposition, and practice in the teaching practicum context (Zhu, 2017).

2. Theoretical Framework

2.1 Social Realist Theory

According to Archer (1995; 2003), human beings interact with the social world by reciprocally changing structural and cultural factors. On one hand, structural and cultural factors continually influence individuals' beliefs and actions. On the other hand, individuals proactively shape structural and cultural factors. Concretely, Archer (2003) identified three categories of "emergent properties": structural emergent properties (SEP), cultural emergent properties (CEP), and personal emergent properties (PEP). Archer indicated that human beings make choices and take actions within the existing structural and cultural milieus in which they reside. Relatedly, structural emergent properties (SEP) encapsulate the physical environments wherein preservice teachers unfurl their teaching practice. Cultural emergent properties (CEP) refer to the norms and regulations that preservice teachers encounter during the teaching practicum period. Personal emergent properties (PEP) encompass preservice teachers' personal motivations, beliefs, and identities in the workplace (Kemmis & Smith, 2008). Overall, these emergent properties act as affordances or constraints depending on how they respond within their daily teaching practice.

2.2 Practice Architecture Theory

Social theorists (Schreiber, 2014) contend that practice is a collective social phenomenon, comprising a constellation of activities and small actions that occur between individuals (Kemmis & Smith, 2008; Uchida et al., 2020). For example, for preservice teachers, through the lens of ecologies of practices, practice architectures are historically prefigured and ecologically arranged intersubjective spaces of *saying, doing, and relating* (Ronnerman & Kemmis, 2016). These three types of human activity are enacted within corresponding arrangements at specific sites termed as practice architectures (Kemmis et al., 2014). The intersubjective spaces comprise sites of practice, which include cultural-discursive, material-economic, and social-political arrangements (Kemmis et al., 2013). These sites of practice are illustrated below:

- 1) *Cultural-discursive arrangements* include languages and discourses that enable or constrain *sayings* in and about practice. Cultural-discursive arrangements enable communication of the practice and shared practices among individuals.
- 2) *Material-economic arrangements* concern the *doings* of practice, which include using the materials and resources available in physical space-time. Material-economic arrangements underscore the medium of activity related to the doings of the practice.
- 3) *Social-political arrangements* focus on the rules that enable or constrain the relations of practice. Social-political arrangements foreground power and solidarity (belonging) in social space conducive to the relations of the practice.

Viewed from this perspective, ESL student teaching regulations and assessments correspond to the CEP and cultural-discursive arrangements. The materials, resources, and physical environments in the ESL teaching practicum characterize the CEP and material-economic arrangements of the practice architecture. ESL preservice teachers' professional identity development relates to PEP and social-political arrangements of the practice architecture. As shown, social realist theory and the practice architecture construct serve as robust theoretical frameworks for understanding ESL prospective teachers' professional learning experiences amid the teaching practicum period. In this paper, we define metaphorical epistemology as teachers' embodied educational beliefs related to language teaching, reflective practice, and professional identity construction.

3. Methodological Approach

3.1 Data Collection

We conducted this project in a four-year university-based teacher education program in the Southwestern part of the United States. The teaching practicum, which includes ESL (English as a second language) classroom observation and English language teaching, is a required step to fulfill the ESL teaching certificate requirement in the state where the participating teachers were studying. Metaphor narratives, as a method of discovery and reflective analysis, have been widely acknowledged as an effective tool for facilitating teacher professional identity development (Craig et al., 2015; Zhu et al., 2020). For this reason, we collected metaphor narratives and written instructional reflections of 20 ESL preservice teachers after they finished their ESL teaching practicum. Both the metaphor narratives and the written instructional reflections center on the evolution of their metaphorical epistemology throughout the teaching practicum period via the online survey. In the metaphorical professional identity survey, the participants were required to describe the change in or stability of their epistemology before and after the teaching practicum. They were also required to illustrate the metaphors they created.

In total, we collected three sources of data that encompass participating observations, individual semi-structured, and group focused interviews. The multiple sources of data supplement the metaphor narratives and the written instructional reflections we collected in this research project.

3.2 Data Analysis

In terms of data analysis, we conducted "fluid, iterative and open-ended" (Charmaz, 2006, p.178) discourse analysis of the metaphor narratives and collected written reflections (Gardner & Coombs, 2009). In this scenario, discourse analysis provides a safe place where the participants can share the evolution of their metaphorical epistemology regarding the interplay of teaching practice and identities by reconfiguring the structural, cultural, and personal emergent properties. Overall, there were three stages of coding when we analyzed the multiple sources of data. During the first stage of the data analysis (open coding), we analyzed the transcripts and the reflective journal entries to identify major themes among the participants. In the second stage, we conducted the "axial coding" process, which entails recursively assorting data into categories and sub-categories. At the third step of selective coding, we made final alignments between the categories and clarified the relationships among the categories. We also guaranteed the reliability and validity of the data analysis by the means of data triangulation and member checking.

Meanwhile, the metaphor analysis encompasses four steps: naming/labeling, sorting (clarification and elimination), categorizing, and analyzing data (Saban et al., 2007; Zhu et al., 2020). At the stage of naming and labeling, we first coded the metaphors and the accompanying illustrations according to their underlying epistemological orientations. During the sorting (clarification and elimination) period, we constantly refined the major themes, and the story plotlines emerged from the metaphors and the written reflections. Additionally, we recorded highly frequent keywords in the metaphors and corresponding narratives. Over the course of categorization, we categorized commonly shared metaphors into one group and further developed the subheadings. Following this line, we identified the patterns of metaphoric epistemology and the professional identity construction trajectories. While analyzing the data, we probed into the dynamics between metaphoric epistemology and professional identity development within one similar category (Zhu et al., 2020).

4. Findings

Overall, we identified four themes of ESL preservice teachers' metaphorical epistemologies. These include ESL teaching, ESL teacher professional identity positioning, the collective influence of ESL course and school-based mentors, and the development of reflective practice and desirable dispositions. The findings are summarized as follows.

First, in accordance with the teachers' metaphors developed by Leavy et al. (2007), we found that nineteen out of twenty participants' metaphorical epistemologies fell into cognitivist/constructivist and situational/socio-historical perspectives. Instead of viewing English language learners (ELLs) as passive knowledge receptors, they viewed language knowledge as actively constructed by dealing with the CEP, PEP, and the cultural-discursive arrangements of the teaching practice. For instance, one participant maintained that the ESL coursework was not a test on the ESL subject content; it was more of an exploration of the mind in situations with ELLs. Another participant realized that the role of an ESL teacher was to guide students and facilitate where students go next. Additionally, participants reflected that the learning-to-teach process was situated in the concrete context, which entailed implementing differentiated instruction and catering to ELLs' different needs. To enact differentiated instruction and take into account the students' varying needs, participants needed to be deliberate about and act within the SEP and PEP in which they worked. Moreover, they needed to mediate the resources, tools, and set-ups, which constituted the material-economic arrangements of practice architecture, necessary for person-centered pedagogy.

Second, consistent with the reflective practice level validated by Larrivee (2008), the participants' metaphoric epistemology changed from pre-reflection and surface reflection to pedagogical reflection through the three categories of emergent properties and the three forms of arrangements in the intersubjective spaces. Most of the participants inferred that the teaching practicum experiences expanded their understanding of ESL instruction and responsibilities. However, none of the ESL participants reached the critical reflection level, which interrogates teaching from broader socio-political contexts. Meanwhile, the written reflections did not show that the participants examined ethical and equitable issues in ESL classrooms. This is possibly due to the short duration of the teaching practicum, which limits the participants' more-in-depth reflections. As noted, metaphors provide alternative mediational tools to explore preservice teachers' dynamic belief system and practice (Zhu et al., 2020).

Third, the participants acknowledged that they modeled reflective dispositions through PEP and social-political arrangements, which contributes to their professional identity as ESL teachers. One participant mentioned that they modeled kindness, understanding, and patience from their mentor teacher. They learned how to empower their students to share their ideas during classroom teaching. Furthermore, another narrated that an ESL teacher should work as a supportive coach who teaches their players many different skills and incorporates values, such as integrity and commitment. By modeling these expected dispositions, the participants mediated the PEP and the social-political arrangement of the teaching practice. From the perspectives of social realist theory and practice architectures, learning-to-teach is not merely a technical process that involves the accumulation of knowledge and skills. It is more of a complex enterprise involving different structural, cultural, and personal emergent properties and arrangements.

Fourth, the participants' metaphoric epistemology predominantly focused on their pedagogical reasoning (Loughran, 2019) and the negotiation of their multiple professional identities (Xu, 2013). Loughran (2019) stated that pedagogical reasoning refers to ESL preservice teachers' epistemology underpinning their informed professional practice. One overarching aim of the ESL teaching practicum is to practicalize theoretical knowledge in the professional context (Cheng et al., 2012). Specifically, the participants developed procedural, reflective-adaptive, and reflective-theorizing approaches to practicalizing their respective contextual knowledge. For instance, the participants grappled with the CEP and the cultural-discursive arrangements of the teaching commitment by gaining a heightened awareness of accommodating the students' diverse needs.

As noted, the participants' metaphoric epistemology contributed to a nuanced understanding of the epistemic nature of teachers' practical knowledge. Moreover, the metaphoric epistemology in this study shows that the participants' practical argument in the ESL teaching practicum context foregrounds their role perceptions, pedagogical obligations, warranted

assertibility, and actualized instructional strategies (Gholami & Husu, 2010). The participants' metaphoric epistemologies shape and are shaped by the emergent properties and practice architectures that bind teaching practicum together as an operational enterprise. The dynamics of a metaphoric epistemology corroborates the multi-level and multi-dimensional nature of a teacher's professional learning, including cognitive, emotional, and motivational aspects (Korthagen, 2017).

5. Implications

The evolution of the metaphorical epistemology generated from the ESL teachers' metaphor narratives, written reflections, and interviews has three implications. First, the different emergent properties and practice architectures illuminate the complexity of the teaching practicums. In this study, the participants gained a heightened awareness of their roles, responsibility, ELLs' various needs, and teaching practices by accessing the emergent properties from the SEP, CEP, and PEP contexts and the three forms of arrangements and conditions within the intersubjective spaces. The unique theoretical framework offers multiple enriching ways to analyze how the ESL participating teachers navigate their role as teachers within the existing professional practice (Uchida et al., 2020).

Additionally, this study extends the analysis into ways that the participants discerned and deliberated as they mediated the contextual resources (CEPs, SEPs), as well as their personal considerations (PEPs). In this way, ESL teacher educators can better ascertain the (in)visible happenings, especially the affordances and constraints, during the teaching practicum period. Particularly, it is imperative that universities and placement schools take responsibilities for ensuring appropriate structural and cultural resources are available to support ESL preservice teachers' PEPs and professional identity development. ESL preservice teachers need to activate emergent properties, which contributes to functioning in practice architectures.

Lastly, examining metaphors created by teachers can shed light on the development of preservice teachers' epistemology, reflective practice, and disposition cultivation. Metaphors, as an archetype of professional identity, serve as powerful pedagogical devices to understand teachers' tactic referential systems (Saban, 2006). Metaphors can be understood not only as a socio-psychological process of the negotiation process, allowing continuous reification of preservice teachers' professional identity development, but also as a powerful analytical framework that leads to fine-grained epistemological negotiation (Zhu et al., 2020). Furthermore, metaphors can reduce teachers' complex instructional beliefs and practices into concrete images, thus epitomizing epistemology in specific professional contexts (Martinez et al., 2001). With the thorough analysis of preservice teachers' metaphoric epistemology, university supervisors, and school-based mentors could adroitly identify how prospective ESL teachers transition to teaching and develop their professional identities by accessing emergent properties and practice architectures.

In conclusion, this study shows the importance of teaching practicums in fostering ESL preservice teachers' diverse metaphorical orientations. By engaging in these practical experiences, ESL preservice teachers either reinforced or modified their metaphorical epistemology of ESL teaching and the corresponding professional identities. This research shows that teaching practicum goes beyond practicalizing theoretical knowledge (Cheng et al., 2012). It also involves developing ESL pre-service teachers' professional identities and disposition cultivation. Through the lenses of social realist theory and practice architecture, teaching practicum involves juggling around the different emergent properties and arrangements within the practice architectures. ESL teacher educators and mentor teachers can better understand the wider cultural-discursive, material-economic, and socio-political influences on preservice teachers' practice and identity construction.

References

- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511557675>
- Archer, M. S. (2003). *Structure, agency and the internal conversation*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139087315>
- Çakmak, M., & Gunduz, M. (Eds.). (2018). *Dimensions and emerging themes in teaching practicum: A global perspective*. Routledge. <https://doi.org/10.4324/9781351209885>
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, UK: Sage.
- Cheng, M. M., Tang, S. Y., & Cheng, A. Y. (2012). Practicalising theoretical knowledge in student teachers' professional learning in initial teacher education. *Teaching and Teacher Education*, 28(6), 781-790. <https://doi.org/10.1016/j.tate.2012.02.008>
- Craig, C. J., Zou, Y., & Poimbeauf, R. (2015). Journal writing as a way to know culture: Insights from a travel study abroad program. *Teachers and Teaching*, 21(4), 472-489. <https://doi.org/10.1080/13540602.2014.968894>
- Gardner, F., & Coombs, S. (Eds.). (2009). *Researching, reflecting and writing about work: Guidance on training course*

assignments and research for psychotherapists and counselors, London: Routledge.

- Gholami, K., & Husu, J. (2010). How do teachers reason about their practice? Representing the epistemic nature of teachers' practical knowledge. *Teaching and Teacher Education*, 26(8), 1520-1529. <https://doi.org/10.1016/j.tate.2010.06.001>
- Kemmis, S., & Smith, T. J. (Eds.). (2008). *Enabling praxis: Challenges for education*. Rotterdam: Sense. <https://doi.org/10.1163/9789087903275>
- Kemmis, S., Heikkinen, H. L., Fransson, G., Aspfors, J. & Edwards-Groves, C. (2014). Mentoring of new teachers as a contested practice: Supervision, support and collaborative self-development, *Teaching and Teacher Education*, 43, 154–164. <https://doi.org/10.1016/j.tate.2014.07.001>
- Kemmis, S., Wilkinson, J., Edwards-Groves, C., Hardy, I., Grootenboer, P., & Bristol, L. (2014). *Changing practices, changing education*. Springer Science & Business Media. <https://doi.org/10.1007/978-981-4560-47-4>
- Korthagen, F. (2017). Inconvenient truths about teacher learning: Towards professional development 3.0. *Teachers and Teaching*, 23(4), 387-405. <https://doi.org/10.1080/13540602.2016.1211523>
- Larrivee, B. (2008). Development of a tool to assess teachers' level of reflective practice. *Reflective Practice*, 9(3), 341-360. <https://doi.org/10.1080/14623940802207451>
- Leavy, A. M., McSorley, F. A., & Boté, L. A. (2007). An examination of what metaphor construction reveals about the evolution of preservice teachers' beliefs about teaching and learning. *Teaching and Teacher Education*, 23(7), 1217-1233. <https://doi.org/10.1016/j.tate.2006.07.016>
- Loughran, J. (2019). Pedagogical reasoning: The foundation of the professional knowledge of teaching. *Teachers and Teaching*, 25(5), 523-535. <https://doi.org/10.1080/13540602.2019.1633294>
- Lynch, H. L., & Fisher-Ari, T. R. (2017). Metaphor as pedagogy in teacher education. *Teaching and Teacher Education*, 66, 195-203. <https://doi.org/10.1016/j.tate.2017.03.021>
- Mifsud, D. (2018). *Professional identities in initial teacher education: The narratives and questions of teacher agency*. Springer. <https://doi.org/10.1007/978-3-319-76174-9>
- Saban, A. (2006). Functions of metaphor in teaching and teacher education: A review essay. *Teaching Education*, 17(4), 299-315. <https://doi.org/10.1080/10476210601017386>
- Saban, A., Kocbeker, B. N., & Saban, A. (2007). Prospective teachers' conceptions of teaching and learning revealed through metaphor analysis. *Learning and Instruction*, 17(2), 123-139. <https://doi.org/10.1016/j.learninstruc.2007.01.003>
- Schreiber, T. (2014). Conceptualizing students' written assignments in the context of information literacy and Schatzki's practice theory. *Journal of Documentation*, 70(3), 346–363. <https://doi.org/10.1108/JD-01-2013-0002>
- Thomas, L., & Beauchamp, C. (2011). Understanding new teachers' professional identities through metaphor. *Teaching and Teacher Education*, 27(4), 762-769. <https://doi.org/10.1016/j.tate.2010.12.007>
- Uchida, M., Cavanagh, M., & Lane, R (2020). Analysing the experiences of casual relief teachers in Australian primary schools using practice architecture theory. *British Educational Research Journal*. <https://doi.org/10.1002/berj.3653>
- Xu, H. (2013). From the imagined to the practiced: A case study on novice EFL teachers' professional identity change in China. *Teaching and Teacher Education*, 31, 79-86. <https://doi.org/10.1016/j.tate.2013.01.006>
- Zhu, G. (2017). Chinese student teachers' perspectives on becoming a teacher in the practicum: Emotional and ethical dimensions of identity shaping. *Journal of Education for Teaching*, 43(4), 491-495. <https://doi.org/10.1080/02607476.2017.1341162>
- Zhu, G., & Chen, M. (2022). Positioning preservice teachers' reflections and I-positions in the context of teaching practicum: A dialogical-self theory approach. *Teaching and Teacher Education*, 117, 103734. <https://doi.org/10.1016/j.tate.2022.103734>
- Zhu, G., Mena, J., & Johnson, C. (2020). Chinese student teachers' teaching practicum experiences: Insights from transformative learning, third space, and dialogical-self theory. *International Journal of Educational Research*. <https://doi.org/10.1016/j.ijer.2020.101638>
- Zhu, G., Rice, M., Li, G., & Zhu, J. (2020). EFL student teachers' professional identity construction: A study of student-generated metaphors before and after student teaching. *Journal of Language, Identity & Education*. <https://doi.org/10.1080/15348458.2020.1777872>

Zhu, J., & Zhu, G. (2018). Understanding student teachers' professional identity transformation through metaphor: An international perspective. *Journal of Education for Teaching*, 44(4), 500-504.
<https://doi.org/10.1080/02607476.2018.1450819>

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