Practice that supports learning and development: A commentary

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Darling-Hammond and colleagues (in press) offer a comprehensive overview of the implications of findings on the science of learning and development for pedagogical practices and the organization of schooling. Their work grows out of a series of meetings sponsored by the Zuckerberg Foundation and organized by the Opportunity Institute, the Learning Policy Institute and the Education Council. Invited attendees to these meetings included representation from researchers in human development, the learning sciences, and the neurosciences, practitioners from local, district and state educational settings, as well as from the philanthropic community. Two major syntheses of the basic research in this area have been published in Applied Developmental Science (Cantor, Osher, Berg, Steyer, & Rose, 2018; Osher, Cantor, Berg, Steyer, & Rose, 2018). This article takes these syntheses and building on both basic research as well as empirical and ethnographic studies of real world school settings articulates implications for practice (Lee, 2017a).

Among the most important findings from the research syntheses on how people learn is that learning and development are multi-dimensional and the dimensions are part of an integrated system. This finding alone represents a major shift. In educational practices, certainly in the United States, we have tended to focus separately on the cognitive and the socio-emotional, particularly in grades 3–12. Early childhood and primary school educators are more likely to integrate the cognitive and socio-emotional in their teaching. Certainly the shift in studies of cognition leading to the development of artificial intelligence conceptualized knowledge as cognitive structures, extrapolating from efforts to program computers to embody schema as conceptual nodes embedded in evolving neural networks as modeled in the functioning of the human brain (Simon, 1995; Simon & Newell, 1958) Tied to these efforts were examinations in various fields of cognitive psychology and educational psychology of the cognitive structures undergirding knowledge in academic domains (DiSessa, 1982; McCormick, Miller, & Pressley, 2012; Schoenfeld, 1987). Standards for teaching in academic domains reflected this attention to cognitive structures of knowledge and assessments focused on demonstrations that these cognitive elements of disciplinary knowledge were understood by students. Most recently there has been a shift to highlighting the importance of social and emotional well-being as a correlate of learning and programs are evolving in schools to address these needs (Farrington et al., 2012). Among the challenges of these recent efforts to attend to socio-emotional learning has been the tendency to implement such programs as separate entities, often focused on a particular sub-set of students who are struggling in school, often poor, and often from minoritized communities. These two foci (cognition and socio-emotional learning) continue to be understood by both practitioners and in the meta-narratives of the general public as separate. Researchers have attempted to connect these two with arguments about poor executive functioning as a significant explanation for poor academic performance ( Heckman, 2012; Heckman & Rubinstein, 2001), with the assumption that executive functioning is somehow singular, something you have or don’t have. The Darling-Hammond et al. (2019) synthesis, as well as the prior syntheses published in Applied Science and Development provide evidence across disciplines that these assumptions about socio-emotional functioning as separate from cognitive work, singular notions about executive functioning and the deficit attributions associated with these positions are not supported by current research.

Among the long-standing findings in cognition is the role of prior knowledge in learning (Bransford & Johnson, 1972; Piaget & Cook, 1952). As with the dilemmas surrounding the uptake of socio-emotional
learning, attention to the role of prior knowledge in learning, and in academic learning in particular, have been filtered through a persistent meta-narrative, in both the general public, in research communities, and in schooling that is informed by assumptions of hierarchies of human beings, based on conceptions of race, ethnicity, class, gender, and disability as difference (DuBois, 1996; Gould, 1981; Mills, 1997). These assumptions place communities defined as “people of color,” and communities living in poverty as having deficits based in earlier conceptions around biological determinants and more recently around assumptions about cultural practices in families. The phrase “culture of poverty” (Farah et al., 2006; Payne, 1998) is widely used to argue that the experience of poverty somehow poses intellective disadvantages that are difficult to overcome, even with schooling.

I raise these two historical and persistent conundrums—separating cognition and socio-emotional experiences; deficit assumptions about intellective capacities within particular communities—because they complicate efforts to transform public schooling to bring this current integrated conception of learning and development into the broad and complicated world of practice (Darling-Hammond, 2004).

I want to draw on and extend somewhat the argument emerging from this SoLD work. I have argued elsewhere that there are emerging complimentary big ideas around learning and development as situated in complex, dynamic processes and systems (Lee, 2010; Lee, 2017b, 2017c). These fields include human development, cognition, the learning sciences, and the neurosciences. This integrated framing documents how knowledge, identity, a sense of efficacy, the experience of relationships, and perceptions (of the self, tasks, settings, and other people) operate in tandem as people engage in thinking, setting goals, and persisting in actions (Spencer, 2006). This system of human meaning making at the level of the individual is situated in the practices in which humans routinely engage (Vygotsky, 1978, 1981). These practices include the affordances of the social organization of the settings in which such practices take place and the nature of artifacts available and taken up in such spaces to facilitate relationship building and knowledge exploration. These practices influencing learning and development take place across multiple settings, of which school is only one (Bronfenbrenner & Morris, 2006).

Thus, the relationships among experiences across settings are major factors shaping which repertoires people develop. Such repertoires include the structure of knowledge in an array of domains, epistemological orientations, phenomenological orientations, and language repertoires. What people learn across settings and how they learn across settings are dynamic and their capacities to learn remain malleable (in different degrees) across the life course. And the demands with which people must wrestle as they learn and develop across time are influenced deeply by where they are in the life course (Bowman, 1989). The learning demands of infants shift in early childhood and again in adolescence, for example. And, even in adulthood, there are shifts in the dilemmas with which adults must wrestle from early adulthood to mid-life into old age. And, finally, this issue of time as context is wide ranging and complex. We have dispositions we inherit across phylogenetic time or our evolution as a species (Cole, 2007; Quartz & Sejnowski, 2002), within cultural-historical time (e.g., experiencing childhood or adolescence during the Great Depression, the Millennial generation, etc.), and within the micro-level processes we experience in moment by moment interactions.

This broad representation of the dynamic systems in which human learning and development unfold are complex and difficult to wrap our heads around. Ironically, we intuitively figure some of this out in real life outside the academy and outside of formal schooling often in family life and in our peer social networks. I knew my mother who was born in 1920 always had cash hidden in books and drawers because of her experience of the Great Depression. Because she lived with us for 28 years before she passed in our house, in her bed, I saw shifts in the demands of development as she aged. I watch my grandchildren—one cohort who are adults and another cohort who range from 9 months to 8 years of age—and I see the centrality of relationships, of feeling loved and cared for, for learning to engage new tasks that differ from the 9 month old to the 8 year old. I see how they explore the world through play and infer intuitive naïve conceptions about topics they will explore later in physics and how they learn through constructive processes how to read; how they learn to read the internal states of their parents, grandparents, and other caregivers in order to manipulate to get what they want; and how in this age the 3-, 4-, and 8-year-old are able to manipulate cell phones, tablets, and computers in ways that even their old grandma wrestles with.

So, yes, this conception of human learning and development is complicated, but we get glimpses of its interacting elements from everyday life. However, transitioning those insights into the practices of
formal schooling are actually much more difficult. This is, in part, because of the political, ideological, and technical influences on the structure of schooling (Darling-Hammond, 2010). And, it is also influenced, I believe, by whether actors at all levels of the system, see the children in public schooling, in particular public schooling in urban and rural areas that serve the poor, as they do their own children. The data on differential application of negative disciplinary practices associated with race, ethnicity, and gender suggest these institutional players do not see these children as their children (Toldson, 2008; U.S. Government Accountability Office, 2018).

The ways a teacher comes to learn how to simultaneously figure out, both in planning and in moment by moment interactions, and the ways to wrestle with the following are the challenge:

- Support students in feeling efficacious
- Make problem solving explicit and public through inquiry
- Draw on relevant prior knowledge, experiences, epistemological dispositions, and language repertoires to facilitate deep knowledge construction
- Determine goals for teaching and learning that include but are not limited to technocratic knowledge unconnected to students current and future possible lives in ways that build deep conceptual disciplinary knowledge (especially in fields like mathematics and science)
- Respond to students’ displays of needs for support (physical, social, emotional, cognitive)

And, this work of teachers and administrators is further complicated by how to address these challenges when there is minimal support in the ecological systems that surround public education. We lack support in terms of the nature of teacher and administrator’s training and certification, the nature and focus on assessments for accountability, the commercially available curriculum, the ways the organization of schools does not represent a professional learning community, and the contested politics of district and state boards of education. And, therefore, it is important that as we aim to re-structure public schooling that just as Darling-Hammond et al. articulate a complex conception of learning and development that we articulate an equally complex understanding of the demands of change.

Finally, so as not to end on a pessimistic note, I want to draw attention to some exemplary programs of research taking place in schools serving minoritized youth and youth living in poverty that capture this multidimensionality of learning and development articulated in this commentary and in the synthesis by Darling-Hammond et al. They focus on disciplinary learning, integrating social, emotional, and cognitive development, attending to issues of identity development in ways that are responsive to the normative demands of development as well as the additional life course challenges that youth from these communities must also navigate.

One is a longitudinal study of mine, drawing on my own work using the Cultural Modeling Framework. The study took place over four years in an urban high school, scaffolding reading comprehension in literature and social studies by drawing on knowledge and language repertoires of the African American adolescents in the study. Texts focused on both generative problems in each discipline as well as topics and themes that reflected the historical and current conundrums of this community in order to facilitate identity wrestling and resilience. School wide supports for mentoring and advising were created along with systems that supported students in monitoring their own development. Supports for student as well as adult learning were integrated as a wholistic system. The study included measures of racial identity, of self-efficacy, of epistemological orientations and perceptions of instruction, repeated over time and correlated with close transfer comprehension assessments developed by the project and far transfer assessments in terms of the ACT system. Findings showed positive correlations among these identity measures, perceptions of instruction, and the outcome measures.

Nasir, Givens, and Chatmon (2019) document a longitudinal project, the African American Male Achievement Project, which continues as a collaborative between the Oakland School District and university researchers at the University of California, Berkeley. The project address the challenges of African American males in the district, again through mentoring and integrating a cultural focus in classroom instruction through what they call “politicized care.” This program provides evidence of short and long term positive impacts on the academic as well as the social and emotional development of these youth. The fact that this is a district level initiative that has been sustained over time is impressive and hopeful.

A third example is Gutierrez’s (2014, 2008) work in establishing the Migrant Youth Program at University of California Los Angeles (UCLA). These programs worked with high school youth from migrant families,
largely Latinx, during the summer, with additional support across the school year, to prepare these youth for college. The program again was organized to support jointly cognitive, social and emotional development, with the curriculum focused explicitly on identity development through the interrogation of critical texts that ranged from Paulo Freire’s Pedagogy of the Oppressed to Mills’ (1959/1970) The Sociological Imagination. Teachers served dually as mentors. Students engaged in what are called teatro performances to represent their critical investigations of the political, social, and economic forces that challenged their lives. Students lived on the UCLA campus during the program and often embodied the metaphor of wings to reinforce their presence on the campus. The vast majority of these youth, in each year’s cohort, went on to be accepted into the University of California system.

Darling-Hammond and Oakes (2019) have a forthcoming volume that powerfully documents seven diverse teacher preparation programs that train teachers to conceptualize and carry out their practices in line with the principles outlined in the synthesis in this volume. Each program integrates cognitive and socio-emotional goals for development, structure learning experiences with social justice goals in mind, and have proven records of producing teachers who are effective and generative.

There are other programs of research, taking place in educational sites. We have much to learn from them. However, I wanted to share these few to demonstrate that what Darling-Hammond et al. call for in this review is achievable. We just need to work to bring these efforts to scale, within districts, states, and across the country.

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