Chapter 2 Learning, Teaching, and *Didaktik*



In this chapter, we will introduce the theoretical premises and conceptual resources we build upon and employ to understand and analyze teaching and learning. In the first part of the chapter, we discuss learning and teaching, and in the second part of the chapter we discuss *didaktik* and in particular the concepts of content and context.

The Processes and Products of Learning and Development

Like other key concepts of educational theory, such as learning and development, people tend to have strong opinions about teaching as an everyday concept. However, in research these terms need to be conceptualized in a manner functional to conducting analytical work, and in theoretical elaboration in order to become relevant to the institutional setting about which claims are made. Of further note is that these key concepts of educational theory are conceptualized differently in different theoretical traditions. For example, 'learning' is conceptualized alternatively as 'constructing knowledge', as 'discerning and reintegrating' phenomena, as 'changed participation', and as 'the appropriation of cultural tools and practices', to mention some prevalent metaphors (see Pramling, Doverborg, & Pramling Samuelsson, 2017). As for 'development' and its relation to 'learning', also this is a theoretical matter. In his elaboration on this relationship, Vygotsky (1978) points out that it is generally conceptualized in one of two ways: either development is seen as naturally evolving and as preceding learning or as synonymous with learning. According to the former conception, typified by a Piagetian developmental framework, children's development takes a particular course, making different forms of understanding and thus learning possible at different times. According to the latter conception, there is no difference between development and learning. This perspective is typified by behaviorist theory. To these ways of conceptualizing the relationship between development and learning, Vygotsky adds a third one. He does so by differentiating development in two metaphorical 'directions' and by introducing the concept of the zone of proximal development (ZPD):

When it was first shown that the capability of children with equal levels of mental development to learn under a teacher's guidance varied to a high degree, it became apparent that those children were not mentally the same age and that the subsequent course of their learning would obviously be different. This difference [...] is what we call the zone of proximal development. It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (p. 86, italics in original)

Hence, according to this reasoning, with an interest in learning and development, it is important to differentiate development into 'actual development', that is, "the level of the development of the child's mental functions that has been established as a result of certain already *completed* developmental cycles" (p. 85, italics in original) and 'proximal development', that is, what the child is able to do with the assistance of a more experienced peer (another child or adult, teacher). The 'proximal developmental level' of the child thus concerns his or her responsivity to developmental opportunities provided in the context of joint activities. In his theoretical elaborations, Vygotsky often employs striking metaphors, yielding poetic images of the transient processes referred to. One example is when presenting ZPD:

The zone of proximal development defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state. These functions could be termed the "buds" or "flowers" of development rather than the "fruits" of development. The actual developmental level characterizes mental development retrospectively, while the zone of proximal development characterizes mental development prospectively. (p. 86f.)

A traditional metaphorics of development as 'growth' is in this way developed to communicate the conceptual distinction made. Metaphorically speaking, what is traditionally seen as development (and by Vygotsky referred to as 'actual developmental level') is backwards directed, and informs us about what the child has already developed, while the 'proximal developmental level' is forward directed, and informs us about what the child is currently in the process of developing. Hence, elaborating with both concepts of development, and their relationship, allows us to study both the *products* and *processes* of development. This is, arguably, critical to a developmental science, such as educational psychology or pedagogy. Somewhat paradoxically, developmental science has by tradition often not studied development, but the outcomes of developmental processes. This is cogently argued not only by Vygotsky by also by other distinguished developmental scholars such as Heinz Werner and Jaan Valsiner. The latter, for example, suggests that

the received norms of how science is to proceed seem to eliminate the core of the phenomena–development–from consideration. The study of developmental processes is easily being replaced by investigation into outcomes of these processes. (Valsiner, 2005a, p. 4)

The products of development, for example, allow themselves to be measured. However, these products cannot inform us about the processes of their formation and generation:

Without any doubt-'outcomes' (i.e. stable states of functioning) of the organism are visible, recordable, and analyzable 'anchor points' for the description of organisms' development. Yet mere description of outcomes is in principle mute to their explanation. (Valsiner, 2005b, p. 395)

This reasoning has clear methodological implications. If interested in children's development, we cannot study what they know before and after participating in teaching, since these products of development will only inform us about what they have already developed, and whether there is a difference in their understanding between these two points in time. In order to get further in our understanding of how children respond to developmental opportunities and what difference makes a difference to such developmental trajectories we need to study the activities in which children are engaged. This ambition therefore premises empirical data in the form of audio or video data. We will discuss methodological issues in Chap. 4.

Elaborating with two concepts of development further has implications for *didaktik*. In Vygotsky's own terms, "good learning' is that which is in advance of development" (p. 89). There is a partly parallel reasoning to this in another pioneering strand of research in the field of educational psychology, the work of the INOM group in the 1970s. However, they formulate this in terms of 'learning as development':

The more foundational changes that the concept development imply have been seen as taking place fairly early in life, while changes in thinking taking place in adulthood primarily have been seen as the result of learning. In this way, changes in thinking taking place in adulthood have been described as quantitative changes while changes in thinking in children and youth primarily have been seen as the development of the very way of thinking and experiencing the world and therefore to a large extent described in qualitative terms (Marton, Dahlgren, Svensson, & Säljö, 1977/1999, p. 140, our translation)

However, as they point out, even adults can go through phases of qualitative development (cf. Luria, 1976). Like in the work of Vygotsky rendered above, Marton et al.'s (1977/1999) reasoning has important implications both for research methodology and for *didaktik*:

Writing in the mid- to end-1970s, they argue that

learning has traditionally been studied quantitatively: under what conditions one learns the most and how the amount of learning relates to the amount of practice (repetition) and its changes over time. However, when it comes to cognitive development there has been a realization that it is not about quantitative growth (more of the same) but rather about qualitative changes in ways of experiencing the world. We do not share this differentiation of learning and development as separate phenomena. Cognitive development is the result of learning. The kind of learning we are interested in concerns the individual coming to experience something in his or her world in a qualitatively different way from before. It is in terms of such qualitative changes that we have tried to describe the outcomes of learning. In other words, in studying learning we have used methods more in line with those commonly used in studies of development. (Marton et al., 1977/1999, p. 161, our translation)

In their case, the primary method was the interview, allowing the researcher to gain access to the process of how learners reason about the problems they face, not merely whether they can give a correct answer (the product of learning) or how much they know (quantitative matters). Hence, there are some similarities but also differences between these two influential bodies of work – the Vygotskian and the INOM group – and the present project. It is with the interest in – and per implication to educational practice contributing to supporting – the kind of learning pointed out by Marton et al. (1977/1999) that the approach we, with the project reported in this book, intend to contribute to further develop, is called developmental pedagogy (Pramling Samuelsson & Asplund Carlsson, 2007, 2008), and why the approach developed in the Netherlands by van Oers (2012) and colleagues is called developmental education. The latter directly builds on the cultural-historical tradition initiated by Vygotsky (se also Chap. 3 of the present volume), while the former was developed on the basis of research conducted in the tradition of the INOM group, here briefly discussed. Some examples of development contingent on learning are narrating (i.e., being able to render, and thus experience, the world in the form of a story) and categorizing objects according to different criteria (e.g., size, colour, texture, shape, material, and/or function).

Teaching and Its Phylogenetic Grounding and Ontogenetic Development

In the theoretical tradition(s) initiated by Vygotsky, development is considered a biological, cultural, *and* social process, not one or the other. The emergence of the kind of interaction we will refer to as teaching can therefore also be understood both from a phylogenetic and an ontogenetic perspective. The former refers to the evolutionary development of human beings while the latter refers to the development of the individual child. From an evolutionary perspective, Barnett (1973), who is a zoologist, has argued that the human species, in addition to previous denominations such as *homo sapiens* (thinking man), *homo faber* (man-the-maker) and *homo ludens* (playing man; Huizinga, 1938/1955), can be characterized as *homo docens*, that is, teaching man. Arguing that teaching is distinct to the human species, Barnett (1973) clarifies what concept of teaching this claim denotes:

I define teaching as behaviour which has two properties: first, it must induce a specific change in the behaviour of another of the same species: second – and this is crucial – it must be persisted in and adapted until the pupil achieves a certain performance. Adjustment of signals to meet the need of an audience is an objective criterion of empathy (Ruesch & Bateson, 1951). It is a rare phenomenon in the animal kingdom. It is not universal even in our own species, but it is a feature of some pedagogical interactions. [---] [T]he definition requires that there should be feedback from the pupil. Hence I am restricting the term teaching [...] to teacher-pupil relationships which are interactive, rather than dogmatic or authoritarian. (Barnett, 1973, pp. 393–394)

Conceptualized in this way, the activity of teaching is intentional, that is, it is voluntary. We may, of course, learn much on our own and with others without them necessarily intending to teach us anything; but the concept of teaching is in this account clearly distinct from the concept of learning. The intention of teaching implies that there is – metaphorically speaking – a direction in the interaction; the intention is to make someone aware of, or able to do, something he or she has not been, or been able to do, before. In the context of our current concern with play-responsive didaktik, this poses a particular theoretical challenge, since play is theoretically premised to be open-ended in nature, that is, it is not clear at the outset of the activity where participants will end up. It should, however, here be noted that neither in activities denoted 'teaching' is it clear beforehand where participants (learners) will end up; this is due to the open-ended nature of the relationship between teaching and learning. There is no linearity or causality between teaching and learning. The learner always makes sense of what he or she experiences (cf. below, on seeing as). However, in teaching, the *intention* is to direct the learners towards some form of experience (e.g., that their experience can be rendered, and thus experienced, in narrative form, that communication can be conducted through text, or that objects can be categorized according to many criteria, to reuse our previous examples of conceptual learning). Still, the outcomes in terms of learning from participating in such activities remain an open and empirical question.

In his conceptualization of teaching, Barnett (1973) points out another feature of such activity: its persistent and adaptive nature. This characteristic implies, first, that teaching is not one-offs; rather, some persistency and continuity are required. That is, teaching by its very nature means not abandoning one's efforts if the learner does not understand or does not immediately become able to do something intended to be developed. Second, Barnett's reasoning implies that the nature of the process of teaching changes in response to the response of the learner(s). As we further understand this, this means that teaching cannot be ascribed one participant – the teacher – only. Rather, teaching understood in this way becomes a joint activity (van Oers, Janssen-Vos, Pompert, & Schiferli, 2003), encompassing all participants (and, to some extent artefacts if present; see e.g., Lagerlöf, 2016; and Skantz Åberg, 2018). Phrased differently, teaching requires as a minimum a response from another participant (e.g., a child); without any response, teaching is reduced to information transmission. The latter does not qualify as teaching from the present perspective. Hence, teaching is a joint responsive intentional activity; it is intentional from the position of the one taking the role of teacher (something that even children can take in intentionally teaching other children, see Kullenberg & Pramling, 2016, for empirical examples), but not commonly from the perspective of the learner (i.e., it is not reasonable to presume in many activities, for example play, that the child participates in order to learn something).

As all forms of cultural activity, if seen from a Vygotskian perspective, teaching is grounded in natural development (Veraksa, Shiyan, Shiyan, Pramling, & Pramling Samuelsson, 2016). One biological disposition this activity builds upon is the emerging ability in young children in interaction with more experienced cultural participants to engage in 'joint attention' (Tomasello, 1999). This ability develops

early; even very young children can be observed to indicate, through some rudimentary pointing and/or sound-making ("da", serving the communicative function equivalent of "there"/"look"), what they have seen also for others to see. Through the other participant's confirming (and perhaps developing) response, joint attention is established. In fascinating research, Tomasello (1999) has shown the emergence of joint attention in ontogeny:

Six-month-old infants interact dyadically with objects, grasping and manipulating them, and they interact dyadically with other people, expressing emotions back and forth in a turn-taking sequence. If people are around when they are manipulating objects, they mostly ignore them. If objects are around when they are interacting with people, they mostly ignore them. But at around nine to twelve months of age, a new set of behaviors begins to emerge that are not dyadic, like these early behaviors, but are triadic in the sense that they involve a coordination of their interactions with objects and people, resulting in a referential triangle of child, adult, and the object or event to which they share attention. (p. 62)

With this emerging ability, children come to 'tune into' the attention of the communicative partner, and try to get the partner to tune into their object of attention, using pointing and other deictic references (Ivarsson, 2003) to do so, as we have already mentioned. This "simple act of pointing to an object for someone else for the sole purpose of sharing attention to it is a uniquely human communicative behavior" (Tomasello, 1999, p. 63). The disposition to engage in some form of proto-communication with others that children are born with thus develops during their first year to the ability to engage in triadic relationships. This triad, consisting of child, another person, and some shared object of attention, metaphorically speaking, constitutes the molecule of education. It is in the 'space' of this triadic relationship that teaching as a cultural activity 'takes place'.

While sharing attention is thus constitutive of what, through teaching, can become an education, and thus critical to the latter, it is not sufficient to this end. For two, or more, people to merely share attention does not necessitate them sharing perspective on what they attend to. For example, looking at a box of objects, teacher and child may share attention on certain objects and appear to agree that 'those are similar', 'those differ from those' etc., that is appearing to perceptively differentiate and categorize or organize the objects in the same way. However, these acts of attention, sustained by deictic references (pointing, and local words such as 'those', 'that', 'here', 'there') may, in fact, constitute what Ivarsson (2003) refers to as 'illusory intersubjectivity'. To the teacher, the objects referred to may be perspectivized in terms of geometrical shapes while the children in the group may perceive these in terms of their colour, size, material, and/or any other features. Without clarifying, through explicating what one intends with 'that', 'those' etc., teacher and children may thus appear coordinated but in fact they talk past each other. This makes it difficult for the teacher to contribute to children's development, lacking the essential responsivity we discussed in extension of Barnett's (1973) conception of teaching.

The Concept of Embedded Teaching

In her study, Dalgren (2017) analyses how preschool teachers and children interact with each other, and how from these interactivities, preschool-pedagogical practices are established. The latter refers to "situation-transcending sociocultural practices ('traditions')" (Linell, 2014, p. 186). That is, from everyday social interaction, preschool-pedagogical practices (or traditions) are constituted. Dalgren (2017) shows that these practices are grounded in recurring activities, such as having a meal and playing on a teeter. She refers to these processes of generating preschoolpedagogical practices from interaction in mundane activities as ones of 'embedded teaching' (see also, Tate, Thompson, & McKerchar, 2005). This notion refers to "incorporating teaching strategies into everyday activities (e.g., play) or routines (e.g., diapering)" (p. 206) and is understood as standing in contrast to what is referred to as "direct instruction", with the latter understood as characterized by "structured conditions that have been specifically designed for teaching target skills" (loc. cit.). What Tate et al. (2005) and Dalgren (2017) refer to as embedded teaching is an attempt to conceptualize how preschool teachers can organize for and support children's development in an institution based on play, themes and social activities very much different from the lessons and time-schedules of school. Hence, the concept of 'embedded teaching' is generally analogous to what we refer to as 'play-responsive didaktik'. However, we would argue that the distinction made by Tate et al. simplifies matters in a way that hides the heart of the matter. According to their reasoning (in the quotes above), it is implied that if teachers structure activities with the intention of supporting children to learn about, for example, a particular domain of knowing, this is a case of direct instruction. However, in the nature of a play-, group-, and theme-based institution, with goals to strive for, not only in pre-planned activities can teachers support children's development. And the kind of mundane activities mentioned by Tate et al., such as play, may in fact have been orchestrated by teachers at the phase of initiating a new (kind of) play or during a play activity through participating as play partners. Hence, while the concept of 'embedded teaching' is generally harmonious with what we refer to as 'play-responsive didaktik', the distinction made simplifies matters in a way that makes it less functional to address teaching activities in a play-based setting such as preschool. That is, we argue that the latter kind of activities by their very nature live in a metaphorical space of tension between the open-endedness of play and the directionality of teaching. It is how this field of tension plays out in actual mutual activities that the present project aims at contributing to empirically investigate and theorize.

The 'What' of Learning and Didaktik

Since in this study we are interested in how children's learning and development are supported in play activities (including how children are supported to learn to play in new ways), how we conceptualize what is sometimes referred to as 'the what of learning' needs to be clarified. In clarifying this matter, we will also make some distinctions between our present study and some of our earlier work. To refer to the what of learning in this study we will use the term 'content'. In some of the earlier work of members of our research group, the concept of 'learning object' has been used. There is a particular developed terminology around this object in variation theory (Marton, 2015; Marton & Tsui, 2004) and it works well for the analyses generally conducted within that perspective. In contrast, in the present study, we will refrain from referring to the what of learning in terms of 'object of learning'. Instead, we will use the notion of 'content'. Granted, in terms of its metaphorical qualities, this notion shares with 'object of learning' an unfortunate reification (see Säljö, 2002, for a discussion of things ontologies). That is, the metaphorical quality of these notions both imply that the what of learning is a thing, while what children learn in preschool and school tends to be matters(!) such as perspectives, ways of communicating, new plays/ways of playing, learning how to learn, and much else that are difficult to perceive as things. The 'contents' we are interested in in our present study are those that are constituted in interaction between participants in play activities. Even if a teacher may plan for, and metaphorically speaking 'plants', for example, conceptual challenges in a play frame, what we are particularly interested in is, if so, whether children respond to these challenges, that is, if they become a matter of negotiation and/or use in continuing activity.

A problem with the metaphorics of 'content', which it shares with 'object', is that it implies that it can be neatly captured, as if it were something that once-and-for-all is fixed/set. However, even such well-defined contents of educational discourse as scientific concepts are by their very nature revisable and developmental. A problem with the implied reification of the metaphorics of 'object' and 'content' is that discussions about learning tend to be reduced to whether children 'know or should know the correct answer or not'. These questions are such simplifications that they become banalization. As we have frequently pointed out, learning is a dynamic process of sense making; what someone learns is not a simple copy of what is taught or rather instructed.

Etymologically, the word 'content' denotes "what is contained"; 'contain' from Latin *continere*, "hold together" (Barnhart, 2004, pp. 213 and 212). Metaphorically, the word 'content' implies what is inside something (some kind of container). The latter – that is, a container – is a common but problematic metaphor for context (see our discussion about this below). However, the etymology of the word 'content' as 'hold together' allows us to conceptualize content as being contextually constituted and as such being part of constituting contexts. There is a dialectic between alluding, or more directly relating to, what one engages with to other experience, thus contextualizing what one engages with in terms of something more familiar; at the

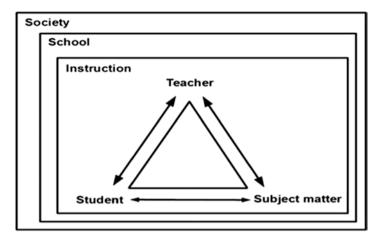


Fig. 2.1 The expanded didactic triangle. (Hudson & Meyer, 2011, p. 18)

same time, constituting what is attended to in certain terms (as such or such, an example of, similar to...) contributes to constituting context(s), that is weaves together (cf. that which 'holds together') past and present experience in sense making.

Didaktik is complex in that it involves at least two persons and something that one intends the other(s) to discern. The teacher and the child(ren) are commonly seen as two counter-parts in a didaktikal triangle (see Fig. 2.1), but in terms of intersubjectivity, as a vital part of communicating and playing together, it is not obvious that it is only the person known as "the learner" who learns. It is equally important that the teacher is responsive to learning about the child's perspective and knowledge as made visible in interaction. Teaching in our conception premises the importance of participants establishing temporarily sufficient intersubjectivity, that is, not only that they share attention on something, but also that their perspectives are coordinated sufficiently for them to go on with a joint activity. Still, participants enter shared activities with qualitatively different ways of understanding and leave the same activities with partly other and different experience. Hence, participating in mutual activities is not premised to result in participants developing identical concepts.

Context and Contextualizing

The basic model of *didaktik* is the triad constituted by teacher – student – content. In line with such a model, fundamental to what we refer to as teaching is that two (or more) participants share attention – and we would add, (partially) perspective – on something 'third' (Tomasello, 1999). In terms of the basic model of *didaktik*

(teacher – learner – content), how a teacher enters into the relationship the learner has with the content is critical.

In an attempt to develop the didactic triangle, Hudson and Meyer (2011) have proposed a model (see Fig. 2.1) encompassing not only relations between teacher, child and content, but also instruction and social contexts.

According to this model, the triadic teacher-student-subject matter relationship is at the core of the instructional process, and the triangle can be understood as the center of other relationships. The first expansion is to add the classroom. Focusing on the instructional process, however, is not enough. There is a second necessary expansion, acknowledging schools [preschools] as subsystems in our society (Hudson & Meyer, 2011, 18).

The triangle is useful to our understanding, but some meta-comment is necessary. This graphical representation, like all other such representations, builds upon particular metaphors. Critically what is at stake in this kind of representation is the theoretical notion of context. That representations are metaphorical in the sense that they present something as if they were something else that they in a literal sense are not, make it analytically necessary to clarify how they are conceptualized. Phrased in other terms, it is analytically important to clarify what features of what is being represented is represented by the model and what features of the model are not representative of what is being represented. This is a classic problem in the philosophy of science (and in philosophy more generally) (see e.g., Hesse, 1966, for an introduction).

In terms of context, there is an important theoretical distinction to be made between different metaphors. Traditionally, context is represented and conceptualized as "that which surrounds" (Cole, 1996). This concept of context is "often represented as a set of concentric circles" that stand for different "levels of context" (p. 133). This concept and model of context is, as Cole points out, perhaps most familiar in developmental research from the work of Urie Bronfenbrenner on the ecology of human development (see e.g., Bronfenbrenner, 1986). An inherent problem with this conception is that context becomes a number of containers, making it difficult to account for (a) context as a dynamic phenomenon and (b) the nature of the relationship between these, beyond one simply containing the other in a succession. That is, this conception of context makes it problematic to account for phenomena such as learning, development and interaction as evolving and developmental ones, and the relationship between contexts tends to be seen as a matter of 'influence'. However, in order to account for dynamic activities such as learning we need conceptualizations that do not constitute phenomena in static terms, and suggesting that there is 'influence' between the 'levels of contexts' provides no explanation; instead it provides a form of black-boxing. With an interest in learning and development and related phenomena, we need to be able to account for how relationships matter. From the perspective we take in this study, the mechanism of the relationships between, for example, the individual and the institutional setting is communication (Wertsch, 1998).

Even if being cognizant of the inherent problems with metaphors for contexts in the form of boxes within boxes – what Lakoff and Johnson (1980) refer to as

'container metaphors' – these tend to be used. One example is the frame-analysis perspective of Erving Goffman. In his writing on frames, relevant to the present project, he writes about frames being laminated (Goffman, 1974/1986), that is, one or several frames can be contained within a wider frame. An additional problem with the container metaphor for context – and its alleged 'influence' – is that it yields an image according to which every participant is equally 'influenced' by the context. However, we know from research that all participants (whether children or adults) in an activity do not exit the activity with identical understanding. Rather, they not only enter the activity with different experience and participate in the activity in different ways; they also leave the activity with partly different experience. The container metaphor for context is not responsive to these facts.

In order to avoid the identified problems with container metaphors for contexts, van Oers (1998) has made an important distinction between 'context' and 'contextualizing'. The latter is responsive to the learner's perspective and to human activities as dynamically unfolding. Contextualizing refers to the sense made by participants, that is, what they see something *as*. For example, if one child sees an image as looking like a space ship, while another child sees the same image as a house, and the teachers sees it as an example of watercolor painting, the participants contextualize what they see and do in different ways. Etymologically, the word 'context' goes back to the Latin word "*contexere*, which means 'to weave together'" (Cole, 1996, p. 135). Elaborating on this meaning of context – and one of its constituent metaphors, 'rope' (cf. 'textile') – Cole argues:

When context is thought of in this way, it cannot be reduced to that which surrounds. It is, rather, a qualitative relation between a minimum of two analytical entities (threads), which are two moments in a single process. The boundaries between 'task and its context' are not clear-cut and static but ambiguous and dynamic. As a general rule, that which is taken as object and that which is taken as that-which-surrounds-the-object are constituted by the very act of naming them. (Cole, 1996, p. 135)

This reasoning per implication puts to the forefront the analytical issue of how we account for context in empirical research, highlighting the need for interactional data where we can access and analyze participants' perspectives and how they invoke and orient toward contexts through their verbal and other actions.

Summary

In this chapter, we discussed how the key phenomena of educational and developmental research often are transformed from processes into products, and how this reminds us of the value of interactional data and analysis. We also introduced the concept of teaching – as arguably characteristic of human life –, a concept that with the current study we intend to contribute, making it relevant to preschool (early childhood education). Finally, we discussed *didaktik* (as distinct from didactics) and how it, among other things, highlights content and contextualizing. In discussing

the latter concept, we reconnected with critique against so-called influence models.

References

- Barnett, S. A. (1973). Homo docens. Journal of Biosocial Science, 5(3), 393-403.
- Barnhart, R. K. (Ed.). (2004). *Chambers dictionary of etymology*. Edinburgh, Scotland: Chambers. Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723–742.
- Cole, M. (1996). Cultural psychology: A once and future discipline. Harvard, MA: The Belknap Press.
- Dalgren, S. (2017). Att göra pedagogisk praktik tillsammans. Socialt samspel i förskolans vardag [Doing educational practice together: Social interaction in the everyday life of preschool] (Linköping Studies in Education and Social Sciences, 11). Linköping, Sweden: Linköping University.
- Goffman, E. (1974/1986). Frame analysis: An essay on the organization of experience. New York, NY: Harper & Row.
- Hesse, M. B. (1966). Models and analogies in science. Notre Dame, IN: University of Notre Dame Press.
- Hudson, B., & Meyer, M. A. (Eds.). (2011). Beyond fragmentation: Didactics, learning and teaching in Europe. Opladen, Germany: Barbara Budrich.
- Huizinga, J. (1955). *Homo ludens: A study of the play element in culture*. Boston, MA: Beacon Press. (Original work published 1938).
- Ivarsson, J. (2003). Kids in Zen: Computer-supported learning environments and illusory intersubjectivity. *Education, Communication & Information*, *3*(3), 383–402.
- Kullenberg, T., & Pramling, N. (2016). Learning and knowing songs: A study of children as music teachers. *Instructional Science*, 44, 1–23.
- Lagerlöf, P. (2016). *Musical play: Children interacting with and around music technology* (Gothenburg Studies in Educational Sciences, 385). Gothenburg, Sweden: Acta Universitatis Gothoburgensis.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: University of Chicago Press.
- Linell, P. (2014). Interactivities, intersubjectivities and language: On dialogism and phenomenology. Language and Dialogue, 4(2), 165–193.
- Luria, A. R. (1976). Cognitive development: Its cultural and social foundations (M. Lopez-Morillas & L. Solotaroff, Trans.). Cambridge, MA: Harvard University Press.
- Marton, F. (2015). Necessary conditions of learning. New York, NY: Routledge.
- Marton, F., Dahlgren, L. O., Svensson, L., & Säljö, R. (1999). *Inlärning och omvärldsuppfattning* [Learning and experiencing the world]. Stockholm, Sweden: Prisma. (Original work published 1977).
- Marton, F., & Tsui, A. B. M. (Eds.). (2004). Classroom discourse and the space of learning. Mahwah, NJ: Lawrence Erlbaum.
- Pramling, N., Doverborg, E., & Pramling Samuelsson, I. (2017). Re-metaphorizing teaching and learning in early childhood education beyond the instruction Social fostering divide. In C. Ringsmose & G. Kragh-Müller (Eds.), *Nordic social pedagogical approach to early years* (pp. 205–218). Dordrecht, The Netherlands: Springer.
- Pramling Samuelsson, I., & Asplund Carlsson, M. (2007). Spielend lernen: Stärkung lernmethodischer kompetenzen. Troisdorf, Germany: Bildungsverlag Eins.
- Pramling Samuelsson, I., & Asplund Carlsson, M. (2008). The playing learning child: Towards a pedagogy of early childhood. *Scandinavian Journal of Educational Research*, 52(6), 623–641.

References 29

- Ruesch, J., & Bateson, G. (1951). Communication. New York, NY: Norton.
- Säljö, R. (2002). My brain's running slow today The preference for "things ontologies" in research and everyday discourse on human thinking. *Studies in Philosophy and Education*, 21(4–5), 389–405.
- Skantz Åberg, E. (2018). *Children's collaborative technology-mediated storytelling: Instructional challenges in early childhood education* (Gothenburg Studies in Educational Sciences, 419). Gothenburg, Sweden: Acta Universitatis Gothoburgensis.
- Tate, T. L., Thompson, R. H., & McKerchar, P. M. (2005). Training teachers in an infant classroom to use embedded teaching strategies. *Education and Treatment of Children*, 28(3), 206–221.
- Tomasello, M. (1999). *The cultural origins of human cognition*. Cambridge, MA: Harvard University Press.
- Valsiner, J. (2005a). General introduction: Developmental science in the making: The role of Heinz Werner. In J. Valsiner (Ed.), *Heinz Werner and developmental science* (pp. 1–17). New York, NY: Kluwer Academic/Plenum.
- Valsiner, J. (2005b). General synthesis: Recurring agendas: Integration of developmental science. In J. Valsiner (Ed.), Heinz Werner and developmental science (pp. 391–424). New York, NY: Kluwer Academic/Plenum.
- van Oers, B. (1998). From context to contextualizing. Learning and Instruction, 8(6), 473–488.
- van Oers, B. (Ed.). (2012). Developmental education for young children: Concept, practice and implementation (International Perspectives on Early Childhood Education and Development, 7). Dordrecht, The Netherlands: Springer.
- van Oers, B., Janssen-Vos, F., Pompert, B., & Schiferli, T. (2003). Teaching as a joint activity. In B. van Oers (Ed.), Narratives of childhood: Theoretical and practical explorations for the innovation of early childhood education (pp. 110–126). Amsterdam, The Netherlands: VU University Press.
- Veraksa, N., Shiyan, O., Shiyan, I., Pramling, N., & Pramling Samuelsson, I. (2016). Communication between teacher and child in early childhood education: Vygotskian theory and educational practice. *Journal for the Study of Education and Development*, 1–23.
- Vygotsky, L. S. (1978). In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.), Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.
- Wertsch, J. V. (1998). Mind as action. New York, NY: Oxford University Press.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

