

Pursuing interests and getting involved: Exploring the conditions of sponsorship in youth learning

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Abstract

The phenomenon of “brokering”—or connecting youth to present or future opportunities—is now well known in the field of learning and youth development as an integral part of how and why youth pursue and remain in particular interest-related learning opportunities. More recently, the related term sponsorship refers to the multiple ways in which youth experience brokering-like moments related to their interests. This article aims to better understand how sponsorship functions in the everyday conduct of youths’ lives, as well as if and how sponsorship mediates young people’s sustained participation and planned future in relation to their interest(s). We leverage a longitudinal data set collected over three years of youth participation in interest-related activities to retrospectively understand sponsorship within the existing conditions of young people’s lives, including youth interest and access to program resources. Findings suggest that *interest* was often not the initial driver for youth entering an activity, but that youth joined activities based on other perceived benefits. Once involved, however, they found themselves developing skills, making friends, and seeing a possible future in the activity. We conclude with design principles intended to support young people in joining an activity, sustaining their participation, and seeing new possibilities for their futures.

Keywords

Interest-related learning; sponsorship; social connections; planned futures

I. Introduction

As social beings in an increasingly interconnected social world, we often make sense of ourselves and our position in the world in relation to others. When we consider how we are doing in our lives, personally or professionally, we tend to make references and comparisons to those around us. And for better or worse, when we make decisions about how to conduct or organize for our well-being or the well-being of our families, we often rely on feedback we receive from others. Young people are no different. As they navigate the many contexts of their lives-- from school to after school, at home or online-- young people organize the business of their everyday lives in ways that are responsive to the feedback they receive from their environment, including the social connections and human relationships that shape and are shaped by their positionality and participation in that environment.

How and why young people get involved, stay involved, or direct their involvement away from particular learning opportunities, then, is also largely shaped by the feedback they receive from others, as well as their perceived positionality in relation to others and the world around them. We know, too, that feedback for both young people and adults can come in many forms-- from that of a fleeting interaction with a peer or co-worker, to a longstanding relationship with a friend or mentor. In whatever form it takes, social feedback is often consequential to the ways in which human beings make decisions, take action, and pursue and participate in activity, because it changes our relationship to ourselves and our worlds (Beach, 1999). Accordingly, the present article seeks to make visible an aspect of feedback that we understand as increasingly central to the investigation of learning in contemporary educational contexts-- that is, the role social connections, or 'sponsors', play in how young people conceptualize and pursue interest-related learning experiences and opportunities.

II. Perspective on learning and the role of youths' interests

As learning scientists trained in the sociocultural tradition, we understand learning as a fundamentally cultural, social, and historical phenomenon (Scribner & Cole, 1973; Vygotsky, 1934/1978). Taking this perspective means that we do not restrict our study of learning to a particular person, setting, place, or content area--rather, we evidence learning through shifting participation in the everyday social practices of one's community (Rogoff, 1990; Lave & Wenger, 1991). To study the phenomenon of youth learning in contemporary sociocultural contexts, our approach is informed largely by what many in the field have come to call "connected learning"--that is, learning that spans home, school, after school, and online spaces, in which "individuals pursue interests with the support of others in ways that support academic or career development, civic engagement, or the enjoyment of life" (Penuel, DiGiacomo, Van Horne, & Kirshner, 2016).

Over the past decade, research from the *Connected Learning Research Network*, of which the authors of this paper have been a part, has demonstrated both the affordances and challenges of designing for connected learning opportunities for young people in ways that are both equitable and sustainable over time (Ito et al., 2013; Sefton-Green, 2012). A primary challenge, in both taking the theoretical perspective inherent in this approach to learning, and in working to embody such a perspective through educational design, stems from the difficulty in robustly investigating a phenomenon that can simultaneously and ever-fluidly span multiple contexts, multiple persons, and multiple content-related domains.

Situated within this problem space, we have found it worthwhile to orient our own recent studies of youth learning around focused investigations into the ways in which youths' interests develop, grow, sustain or shift over time (see Penuel et al., 2016; DiGiacomo, Van Horne, Van Steenis, & Penuel, in

press). Attention to how, why, where, and with whom young people develop and pursue interests provides insight into not only how youth organize and conduct their participation in everyday social practice(s), but what matters to them in that organization. Our recent inquiries into youth interests and learning, then, are principally informed, both theoretically and methodologically, by a social practice perspective. Social practice theory, broadly speaking, orients inquiry on human action and activity toward the broader social practices of which humans are a part—and in particular, calls for methodological tools that amplify first person perspectives as to understand better how reasoned actions are conceptualized and made in relation to the relevant conditions of one's life, known to be shaped by and through broader sociocultural and sociopolitical forces/circumstances (Holland and Lave, 2009; Dreier, 1997; 1999; Holzkamp, 2015).

a. Amplifying the role of social connections in studies of youth learning and interest

At the heart of both of how we conceptualize learning and ground our related inquiries into the phenomenon is the issue of social connections and human relations. Emphasis on the important role that the social situation of development plays in learning is well studied within the field (e.g. Rogoff's apprenticeship studies, 1990; 1991; Vygotsky's argument for the zone of proximal development, 1934/1978). More recently, connecting learning studies have demonstrated the centrality of social connections in the design and organization of high quality learning opportunities. Indeed, being "peer supported" is one of the framework's three learning principles (Ito et al., 2013). Connected learning environments are spaces in which "peers help broker access to new opportunities and resources to deepen and pursue interests and provide strong support within activities" (Penuel et al., 2016). But we know, too, that adults play an important role in organization of young people's learning lives, both in and out of school. The phenomenon of "brokering"—or connecting youth to present or future opportunities—is now well-known as another salient piece of the puzzle into how and why youth pursue and remain in particular interest-related opportunities (Barron, Martin, Takeuchi, & Fithian, 2009, 2009; Cartun, Kirshner, Price, & York, 2014; Ching, Santo, Hoadley, Peppler, 2016; Nacu, Martin, Pinkard, & Gray, 2014).

Most recently, some of our colleagues have encouraged the use of the term *sponsorship* to encompass the multiple ways in which youth experience brokering-like moments related to their interests (Ito et al., in review). This is not just a semantic change-- but rather highlights a purposeful awareness the varying roles people can play as mentors and connectors in young people's pursuit of their interests. As we understand it, inquiries into the texture of sponsorship as it relates to the pursuit of interest-related learning activity also calls attention to various types of people and spectrum of relations that can serve to guide youth toward or away from particular interest-related learning opportunities. In whatever form they take, we see investigations into the nature of sponsorship as it relates to the study of youth learning and interest as worthwhile. Such a perspective stems largely from our continued belief in the central role that social connections play in how and why, we, as social beings, organize the business of conducting our present and future lives.

This article, then, comes from our desire to understand better how sponsorship functions in the everyday conduct of youths' lives, as well as if and how sponsorship mediates young people's sustained participation and planned future with relation to their interest(s). To do so, we leverage a longitudinal data set collected over three years of youth participation in interest-related activities to retrospectively understand sponsorship within the existing conditions of young people's lives, including interest and access to program resources. This retrospective vantage point allows us to explore moments where youth discover and develop interests and how those interests continue, or not, from their transitions from high school to college or work. Accordingly, the following research questions guided the present investigation: How and why do young people pursue interest-related activity? And relatedly, what role, if any, does sponsorship play in that pursuit?

III. Methods

To understand the conditions of sponsorship and the role this played in shaping youth's interests, we utilized a multiple case study methodology (Stake, 2005). We examine youth interests across three years, drawing on survey and interview data.

The study described in this article comes from a larger, longitudinal study supported by the Connected Learning Research Network (Penuel et al., 2016). This study investigated the trajectory of youth's interests over time, including how and where those interests formed, for youth participating in connected learning programs across the United States. These programs, most of which remained in operation at the time of the writing of this article, were typically out-of-school spaces intended to provide high quality learning opportunities that leveraged and extended youth's interests. In the case of the programs we interacted with, their content area emphases varied widely, ranging from video gaming and digital journalism to museum-based science and environmental research.

We initially made contact with dozens of youth program directors across the United States, and ultimately collected data from adolescents aged 13-17 years old, representing 19 different youth programs across the United States and Canada. In the initial wave of data collection in 2013 and 2014, 266 youth completed surveys about their program-related experiences and interest-related pursuits. See Penuel et al (2016) for an overview of these survey results. From this group of 266, however, 54 youth agreed to participate in a follow up phone interview in the summer of 2015. In the initial survey, youth answered several questions related to their experience of an interest-related pursuit, that is, a pursuit that youth said they enjoyed doing, believed they are getting better at or learning from over time, and sought out whenever they had the opportunity. Following up with the youth through interviews allowed us to pay particular attention to how youth described the realities they faced when participating in these interest-related activities. In line with a social practice approach, our interview protocol purposefully elicited the ways that youths' engagement and persistence with activities was related, if at all, to their life circumstances (Azevedo, 2011, Dreier, 2008; Mørck & Huniche, 2006). For example, questions elicited youth's descriptions of their activities and purposes for participation, their current involvement in their activity, the networks (e.g. linkages and supports) they drew upon when participating in their activity, obstacles they experienced, and how they perceived the future as related to their participation. The interviews also elicited youths' perspectives on how their participation changed over time. All interviews were recorded and transcribed.

For the 54 youth we interviewed, we coded these data for conditions of sponsorship and outcomes of participation in the activity of focus in their interviews (e.g. gaming, science research). Sponsorship codes included touch points (how many individuals brokered youth's participation in the activity), whether youth had initial interest, and whether the program required an application or interview process to access participation ("selectivity"). We additionally coded for outcomes of participation, which included sustained participation (were the youth involved still in the program at the time of the interview); a planned future in the activity; and for youth's expanded networks (did youth have more connections within the field of their interest than before). From these coded data, we develop case displays to surface thematic patterns. From these patterns we were struck by the 13 youth who did not express an initial interest but had sustained participation and a planned future in the activity. For these 13 youth, we developed a data display regarding how, when, and why these youth first became involved in the connected learning program. After discussing and finding agreement with these displays, we developed findings claims and interrogated them for alternative explanations.

IV. Findings

We found the 13 youth to have various patterns of sponsorship ranging from a caring adult suggested involvement to a youth who saw social value in the program, knew a friend in the program, and had a caring adult who suggested they get involved. Across the 13 youth, 5 report getting involved because they needed a job, 6 reported that they saw social value or social capital in the program or activity, 5 knew a friend in the program or activity, and 4 had a caring adult who recommended they get involved in the program or activity.

For youth in this study, first becoming involved in interest-related activities was a product of an existing need for work or extra-curricular involvement; and they discovered the program through someone they knew, such as a teacher, parent, or friend. Once this more-immediate need was fulfilled, however, they found themselves developing skills, making friends, and seeing a possible future in the activity.

a. Pursuing a need and having a knowledgeable other

For youth in this study, their initial involvement in interest-related activities was not always motivated by an existing interest, but rather an existing *need*. And for many youth, this need was employment. In fact, of the 13 focal youth, 5 described seeking out participation in the programs of study because they “needed a job.” And for all of these youth, learning about the program as an option for employment emerged from an existing connection.

Mae, for example, describes getting involved in Coastal Science because a teacher at her high school was “trying to encourage us [other students] to sign up for summer jobs and internships” and mentioned Coastal Science as an option. Frank and Devon describe needing a job and knowing a friend who was in Media Production Program (MPP). And Raul described applying to work at City Science Academy (CSA) because he needed a job and knew a friend who had worked there. Another youth, Danielle, applied to work at MPP because her mother suggested she apply.

The prevalence of youth becoming aware of the program through an existing relationship largely confirms the integral role relationships play in sponsorship (see Ching et al., 2016). At the same time, what analysis of our retrospective data show is the varied texture of this sponsorship, including the range of social connections that served to support young people’s initial entree into organized activities that came to hold personally relevant meaning for youth’s current and imagined futures. The degree of connection the sponsor had with the program varied-- ranging from just having heard about the program, in some cases, to having worked there themselves, in others. Similarly, the degree of closeness or proximity that the various “sponsors” had to the young person varied as well- ranging from being an immediate family member to a former school teacher. Table 1, below, provides a top level overview of the types of social connections articulated by the youth.

Sponsor type	Count
Friend/Peer (e.g. one or more friends from in or outside-of-school)	5
Family member (e.g. Mom, grandma, cousin)	2
Teacher (e.g. Science or English teacher at school)	3

Table 1. *Sponsor type*

Additionally, youth described the social value that they perceived the program to have as being superior to other forms of employment. Their participation appeared motivated by the belief that their involvement would benefit them in some way beyond monetary value.

Raul, for example, describes his decision to apply to City Science Academy as seeking a job with “substance”:

In freshman year I had a friend that told me that he had worked [at the museum] as an intern, and I wanted to get a job during the summer. I applied because I figured that this was better than just calling and working at any retail store. It would be something that would have more substance to it.

Similarly, Lorena chose to apply for a job at City Science because she saw her participation as serving an instrumental purpose-- supporting her in getting accepted to college. As she told us in her interview, even though her family is “pretty big” and she has “lots of siblings”, she’ll “be the first one in [her] family to go to college.” Lorena described going to college as a “major goal” and, in turn, the driving force behind her participation in museum.

For Danielle, applying to the MPP came from both the need for work and the need to be *involved* in something. She describes his entry into MPP:

Starting out, I never liked journalism at all. I was always like the one to follow my sister around the high school. She was a sophomore, I was a freshman. Every day after school, I would go with my sister to her basketball practices, to her basketball games. My freshman year consisted of nothing but me with my older sister. Then my mama was like, “You need to do something this year,” because I didn’t want to do nothing at my school...Then again, I never tried, but I didn’t want to, either. My Mama was like, “You have to do something. You need to get a job. You need to get some money...”

Her involvement in MPP served to both provide a job but also gave her something to be part of.

b. Discovering interests/developing expertise

All 13 focal youth in our study sustained their participation in the activity they began three years prior. Although their participation came out of a need for work or the desire to be involved in something beneficial, once they were immersed in the activity, something happened for youth in this context that supported them to continue participating. For most youth, this sustained participation was motivated by their enjoyment or fulfillment from the activity, their friends and peers at the activity or program, or their expertise development.

Danielle, for example, initially attended MPP for the \$100 stipend and continued participating the first year to ensure she would get the stipend. Over time, the monetary motivation turned into enjoyment of journalism, photography, and video editing. She told us, “I guess you could say that was my motivation, the money, and then after I got the money, I realized how much I liked it so I kept sticking to it.”

Similarly, Frank, stumbled upon MPP and decided to join. His sustained participation was three-fold, he loved editing videos, he made friends, and he developed expertise over time. He described when he first got started at MPP:

When I first got into it, I was kind of a new person. Everyone else was just doing it with ease, and when I started editing things for me, I had no clue what I was doing. When I did do certain things, it was always incorrect, or something was wrong with it, I had to tweak it or it needed to be fixed. That’s what kind of made me better at it, learning my mistakes and getting used to it and just not giving up and just keep going with it.

As he struggled through and learned to edit videos, he also made friends who loved to edit videos, too. He said this was his motivation to get to work at MPP:

I can't wait to go to work and get on the block, go out and edit. So the motivation is for everyone to come and see, or for me to help them, we all are that close, so it's the love and working together.

Finally, Frank, MPP invited youth who participated in the program and graduated high school to become interns to support the new youth joining the program. Frank was an intern at MPP helping new youth learn to edit videos and develop the expertise and relationships he gained while he was a participant in the program.

Internal and external recognition of expertise development played a role in the sustained participation of youth. For many youth, like Frank, the recognition came from formal structures within the program that gave youth positions to support their peers or near peers through internships or other similar positions. Chance was initially forced into a school elective for programming but over time he "got into the class" and "actually did get really good at it." He saw the connection between the new coding skills he was developing and his love for technology that got him interested once he was in the class. Since beginning the class his sophomore year, he served as a teacher's assistant (TA) within the computer science class and had plans to attend a summer program for those with more advanced understandings of the discipline.

Across the types of activities youth participate in, sustained participation for the youth in our study was grounded in the social networks youth developed through their participation, the enjoyment and fulfillment they received from participating, and the recognition that they were developing expertise in this activity that they enjoyed.

c. Planned futures

For the 13 focal youth in our study, in addition to sustaining their participation over multiple years, each youth also planned some type of future related to their interest-related activity at the time we interviewed them over two years after completing a survey about their involvement in and experience with their interest-related pursuit. These young people ranged from juniors in high school to youth who just graduated and were between high school and college or other future plans. At the time of the interview, these young people were planning their future pursuits and shared with us their future plans. What our data show, again, is the varied texture of their planned future participation related to their interest. By and large, the youth planned a future related to the interest they developed through participation in the activity or program we were interviewing them about. Most of the youth (10 of 13) articulated specific plans to seek a particular career (e.g. go into Bio-Sciences or Environmental Research) or be a particular type of professional (e.g. an Engineer, Veterinarian, DJ).

Danielle described her future plans at the intersection of her two passions, education and journalism:

I wanted to be a teacher, but now that I've worked with journalism for three years, I want to do journalism, so I want to combine them. I want to teach journalism so I can teach journalism video editing... with my degree in journalism, I want to come back to MPP and teach journalism like they taught me and hopefully change people like they changed me.

When we spoke with Danielle, it was the summer between high school and college and she was interning at MPP before she started her journalism major in college that fall. Danielle, like several of her peers at MPP, entered the program because it served a financial or social need but she quickly

became interested in the journalism aspect of the work and continued to pursue it into her postsecondary schooling. Other young people in the MPP program had similar experiences and they reported continuing on into university programs for journalism or film editing.

Raul, an explainer at City Science Academy, reported that his future plans were informed by the people he met through City Science Academy, specifically times where professionals came to STEM nights and shared their career experiences. For him, these networking opportunities solidified his future plans to apply to a college “where they do an aerospace engineering, and they do another thing called mechatronic engineering. It’s a combination of mechanical engineering, computer and electrical engineering.”

In the other three cases, they told us of their future plans to continue to pursue their interest through planning to major in a particular field or take community college classes related to that field. For example, Nina told us she was headed to a university on full scholarship and she planned to major in psychology and plans to be a psychologist of some sort. Of relevance to how we understand learning and participation in contemporary 21st century contexts, some youth also told us that they planned to take what they learned from participation in their interest-related activity and transfer it/make it applicable to what they understood as a distinct, but relatable, career. And lastly, a couple of youth expressed to us that while they had plans to continue to pursue their interest in the future, they were not yet totally sure of what would look like.

The ways in which the young people’s articulated their planned futures highlights the centrality of ‘work’ to youth’s developmental stage-- that is, as young persons who will one day soon be either graduated from high school or college (see Cole, 1996). Accordingly, the category of ‘work’-- often understood in contemporary industrialized societies as the most pressing need and appropriate activity for young people who have recently finished school-- makes sense as coming through in our analysis as the most frequently articulated rationales for future participation. In other words, what our analysis showed is that the young people in our study were aware of what society would soon expect of them. In this way, we understand their articulation of their planned future in relation to their interest as stemming from their understanding of how their interest(s) *could serve a need* for them in either their proximal or slightly longer term futures.

V. Discussion/Conclusion

We discuss what our findings suggest for people and programs who want to design for and foster youth interests - from discovering new interests to program qualities that support youth from interest discovery to sustain participation and future plans. We present our discussion in the form of four design principles for designing opportunities that support young people to join an activity with little or no interest in that activity and go on to sustain participation and see new possibilities for their futures.

First, ***create entry points with connections to a variety of possible youth interests.*** Youth show up in spaces, programs, and activities with experiences, expertise, and interests even if they are not interested in the activity being offered. The focal youth in this study demonstrated this through sharing how they made connections between the activity they were doing and their interests, experiences, and lives. For Chance, an elective he was “forced into” became interesting and motivating when he could use computer science to work on technology, something he was really interested in. Something that started out filling a need, turned into a sustained pursuit. Similarly, Danielle from MPP, saw the connections between her love for teaching and education and journalism, so much so, that with her journalism major, she wants to work with youth in the future.

Next, **provide opportunities for youth to do things of substance**, as Raul told us. Youth in our study expressed the desire to do meaningful and relevant work. Many youth need to have a job or some form of compensation for summer work. Chicago Cities of Learning (chicagocityoflearning.org), for example, partnered with the City of Chicago to support meaningful, substantial youth summer work initiatives and continues to map the ecology of learning opportunities from exploring interests to deepening interests for youth across the city. When activities or programs meet a need for youth but also ask them to engage in relevant work, youth find new interests and new opportunities for deepening those interests.

Third, **create spaces and structures that value youth contributions**. The focal youth in this study primarily discovered interests in existing programs (after school or in-school) that had structures designed to sustain participation of youth and create opportunities for young people's contributions to be recognized within and outside of the program. For example, both City Science Academy and Coastal Science Academy had formal leveling-up structures where youth could move up into leadership positions or join teams of scientists working on specific projects. In addition, they had opportunities to share their work outside of the programs. The Media Production Program was similar in that youth who graduated high school were invited to stay on as interns to support youth who were in the program. MPP staff also encouraged youth to find venues to share their work. Informal and in some cases, formal, learning programs not only serve as a place of interest discovery but also one of sustained participation through different ways of valuing youth contributions from leveling-up structures to community building and supportive social relationships. For example, almost every youth who participated in MPP reported the adults from the program to be the most supportive and productive connection they made.

Finally, **support youth to expand their networks and to experience or see possible futures**. Youth benefit from communities where they have models of what they could do and where they could go with their new found interests and skills. Youth reported a variety of ways in which they learned about and explore future opportunities from intensive laboratory experiences with scientists to a supportive adult to helped with college applications. These programs provide pathways out through recognition, sponsorship, and supportive adult-youth relationships. Some programs, such as MPP, also provided jobs for youth who completed the program but were home for the summer between college and high school. One way to understand what is going on here is to highlight these purposeful structures that the programs use to provide continuity and connections for young people.

In summary, intentional development of youth programs that meet the needs of youth (financially or socially) and provide opportunities for meaningful, relevant work where their contributions are valued and their networks are expanded can create the space for youth to discover interests and sustain them well into their careers.

References

- Penuel, W.R. & DiGiacomo, D. (2017). Connected Learning. In *The Sage Encyclopedia of Out-of-School Learning*. (Vol. 2, pp. 132-136). Thousand Oaks, CA: Sage Reference.
- Azevedo, F. S. (2011). Lines of practice: A practice-centered theory of interest relationships. *Cognition and Instruction*, 29(2), 147-184.
- Azevedo, F. S. (2013). The tailored practice of hobbies and its implications for the design of interest-driven learning environments. *Journal of the Learning Sciences*, 22(3), 462-510.
- Barron, B. (2006). Interest and self-sustained learning as catalysts of development: A learning ecology perspective. *Human Development*, 49(4), 193-224.

- Barron, B., Gomez, K., Martin, C.K., & Pinkard, N. (2014). *The digital youth network: Cultivating digital media citizenship in urban communities*. MIT Press.
- Beach, K. (1999). Consequential transitions: A sociocultural expedition beyond transfer in education. *Review of Research in Education*, 24(1), 101-139.
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.
- DiGiacomo, D. K., Van Horne, K., Van Steenis, E., & Penuel, W. R. (in press). The material and social constitution of interest. *Learning, Culture and Social Interaction*.
<https://doi.org/10.1016/j.lcsi.2018.04.010>
- Dreier, O. (1997). *Subjectivity and social practice*. Aarhus, Denmark: Center for Health, Humanity, and Culture.
- Dreier, O. (1999). Personal trajectories of participation across contexts of social practice. *Outlines: Critical Social Studies*, 1(2), 5-32.
- Dreier, O. (2008). *Psychotherapy in everyday life*. New York: Cambridge University Press.
- Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. *Educational Psychologist*, 41(2), 111-127.
- Holland, D. & Lave, J. (2009). Social practice theory and the historical production of persons. *Action: An International Journal of Human Activity* (2), 1-15.
- Holzkamp, K. (2015). Conduct of everyday life as a basic concept of critical psychology. In E. Schrauble & C.Højholt (Eds.), *Psychology and the conduct of everyday life* (66-99). London: Routledge.
- Ito, M., Gutiérrez, K., Livingstone, S., Penuel, W., Rhodes, J., Salen, K., & Watkins, S. C. (2013). *Connected learning: An agenda for research and design*. Irvine, CA: Digital Media and Learning Research Hub.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Maul, A., Penuel, W., Dadey, N., Gallagher, L. P., Podkul, T., & Price, E. (2017). Measuring experiences of interest-related pursuits in connected learning. *Educational Technology Research and Development*, 65(1), 1-28.
- Mørck, L. L., & Huniche, L. (2006). Critical psychology in a Danish context. *Annual Review of Critical Psychology*, 5.
- Nissen, M. (2005). The subjectivity of participation: Sketch of a theory. *International Journal of Critical Psychology*, 15, 151-179.
- Penuel, W.R., DiGiacomo, D., Van Horne, K. & Kirshner, B. (2016). A social practice theory of learning and becoming across contexts and time. *Frontline Learning Research*, 4 (4),30-38.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in sociocultural activity*. New York: Oxford University Press.
- Scribner, S., & Cole, M. (1973). Cognitive consequences of formal and informal education. *Science*, 182(4112), 553-559.
- Sefton-Green, J. (2012). *Learning at not-school: A review of study, theory, and advocacy for education in non-formal settings*. MIT Press.
- Stake, R. E. (2013). *Multiple case study analysis*. New York: Guilford Press.
- Vygotsky, L.S. (1934/1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.