Disruptions to Practice: Understanding Suspensions of Youths' Interest-related Activities

Katie Van Horne, University of Colorado Boulder, katie.vanhorne@colorado.edu
Erica Van Steenis, University of Colorado Boulder, erica.vansteenis@colorado.edu
William R. Penuel, University of Colorado Boulder, william.penuel@colorado.edu
Daniela DiGiacomo, University of Colorado Boulder, daniela.digiacomo@colorado.edu

Abstract. An emerging line of research in the learning sciences focuses on generating a better understanding of how youth develop and sustain in interest-related pursuits. In this paper, we focus not on what sustains engagement in interest-related activities but on what disrupts it. Disruptions have largely been a neglected object of theorizing, even though they are acknowledged in models of interest development, such as the four phase model (Hidi & Renninger, 2006). We build upon Azevedo's (2011, 2013) lines of practice theory by drawing on conceptions of social practice from German-Danish critical psychology to expand and complicate the notion of "conditions of practice" for the youth in our study. We examined youth in our interview study who reported experiencing disruptions to their interest-related pursuits. We found that some youth suspended their participation due to loss of access to necessary resources, and other youth suspended pursuits due to competing educational commitments and future desires.

Keywords: interests, learning across settings, social practice, conditions of practice, youth pathways, desired futures

Introduction

An emerging line of research in the learning sciences focuses on generating a more robust understanding of how youth develop and sustain interest-related pursuits (e.g., Azevedo, 2006; 2011; Barron, 2006; Greeno, 2006). An interest-related pursuit as we define it here is one that youth enjoy doing, believe they are getting better at or learning from over time, and seek out when they have the opportunity. A focus on such pursuits is important because engagement in interest-related pursuits can catalyze learning, open up future learning opportunities and possible careers (Ito et al., 2013; Barron, 2006).

In this paper, we focus not on what sustains engagement in interest-related activities, but on what disrupts it. Disruptions have largely been a neglected object of theorizing, even though they are acknowledged in models of interest development, such as the four phase model (Hidi & Renninger, 2006). Interest does not develop in either continuous or linear pathways (Azevedo, 2011; 2013). Sometimes pathways are interrupted or change course. Here, we attend closely to and theorize changes to conditions and opportunities that disrupt or lead youth to suspend their participation in interest-related activities.

We conjecture that a key source of disruption is a change to the conditions supporting participation related to material resources and time. Many of youths' interest-related pursuits are supported by settings and resources outside of school. These opportunities often require additional financial resources and supports. Young people who are dependent on in-school opportunities or resources from public institutions have differential supports and access to out-of-school learning opportunities for engagement in interest-related pursuits than youth who have ready access to these opportunities (Ito et al., 2013). For these youth, it can be difficult to turn interest-related pursuits into desired future careers or into desired resources. For youth for whom limited financial resources are less of a concern, interest-related pursuits and commitments out-of-school also compete with personal, local, and societal goals related to education and career pathways. Youth have to attend to the competing goals of school activities and future educational commitments and desires. For these youth, time is a scarce resource, and changing availability of time for pursuits can lead to youth suspending those pursuits. Because interest-related "lines of practice" (Azevedo, 2011) are often mangled by shifts in opportunity and competing engagements and because of the increasing recognition of the importance of interest for long-term learning outcomes, more attention is needed to understanding the disruptions in interest-related to pursuits.

Theoretical framework

We draw in part on Azevedo's (2011; 2013) "lines of practice" theory of individual preferences and conditions of practice that encourage persistence in interest-related participation over time. Azevedo (2013) argues that there

are four features of interest-related practices that encourage persistence in lines of practice over time by affording participants the ability to tailor their participation. The features of conditions include: "an extensive and varied material infrastructure," opportunity to pursue the interest in multiple communities or sites, ways in which youth can participate in interest-related activities of various short and long durations, and space for collaboration and sharing of ideas (p. 1). We characterize young people's lines of practice as influenced by both their preferences and the conditions of practice in which youth participate across contexts and over time. Within one hobby or interest-related activity an individual might participate in multiple lines of practice that change throughout the various contexts of their lives thus looking different than it did before.

However, not all youth have equitable opportunities for participation within the conditions of their interest-related activities and some youth experience disruptions and competition within their lines of practice. We build upon Azevedo's lines of practice theory by drawing on conceptions of social practice from German-Danish critical psychology (Dreier, 1997; Mørck & Huniche, 2006; Nissen, 2005) to expand and complicate the notion of "conditions of practice" for the youth in our study. As we analyze the ways in which youth distribute their interest-related pursuits across settings, we argue for the need to pay attention to the contexts in of youths' lives in relative to one another. In any given social context, youths' "personal engagements and stakes in context depend on its status in relation to other contexts in their trajectories of participation" (p. 42). Youth have differential access to contexts and may lack access to positions within those contexts which can lead to inequitable scopes of possibility (Dreier, 2009).

We argue differential success pursuing interest-related pursuits is dependent on youths' access to and roles in and across the many contexts of their lives. This is in contrast to dominant discourses that name interest development as a personal psychological attribute that operates in or out of formal learning environments (see Bathgate, Schunn, & Correnti, 2014). Using personal attributions (e.g., motivation, ability, grit) as justification of success or failure do not address the ways in which youth must organize their lives across the contexts in which they are participating. Holzkamp (2015) argues, "such personalizing attributions close off further questioning as to the possible disruptions and contradictions in the way students organize their lives that arise from shortages of specific resources but also from many other more or less unknown circumstances" (p. 66). We utilize this framework to investigate youths' interest-related practices and the nuances of those more or less unknown circumstances. Our analysis seeks to understand how those conditions of practice affect their participation now and their ideas about desired futures.

Methods

In order to explore the conditions of practice that lead to youth suspension of interest-related pursuits, we asked two research questions:

1. Why do youth suspend interest-related pursuits?
2. What are the effects of suspension on youths' future desires and career goals?

These questions informed how we methodologically carried out our study and investigated our data. Our larger project attended to youths' engagement with interest-related pursuits and how those interests changed over time and across contexts. In an 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. For this study, we relied on an analysis of interviews with youth to learn about the nature of why youth suspended or experienced disruptions to their participation with those interest related pursuits. Using interviews allowed us to pay particular attention to how youth described the barriers and obstacles they faced when participating in interest driven activities. We elicited and attended to ways that youths' engagement and persistence with activities is informed and influenced by their specific life circumstances (Azevedo, 2011, 2013; Mørck & Huniche, 2006). These in-depth discussions with youth via our interviews were particularly relevant to us developing an understanding of why and under what conditions youth suspended participation in activities.

Participants

Youth aged 13-17 years old representing 19 different youth programs across the United States and Canada participated in this study. In the initial waves of data collection, 266 youth completed surveys about their interest-related pursuits in both 2013 and 2014. Fifty-four youth from this group agreed to participate in an interview in wave three. Each youth participated in an interest-related activity such as video gaming, digital journalism, music production, writing, and illustrating.

We selected nine students to highlight in this study through a multistage process aimed at identifying representative cases of young people who reported experiencing disruptions in their interest related pursuits. First,

we created a representative data display for all 54 youth in the larger study; the data display included youth's demographic information as well as characteristics we identified as important to understanding youth's articulations of disruptions and activity suspension. These included the youth's articulations of their history of participation in their chosen activity, the type of disruption they experienced, their future goals, and the outcome of the experienced disruption. From this table we identified youth who we experienced a disruption that led to a suspension of their interest related activity. The data display allowed us to identify two broad categories of disruptions that the youth experienced. These included a loss of material or financial resources or the prioritization of formal schooling. From the list of youth who suspended their interest related pursuits because of these types of disruptions, we selected nine representative case studies. There are five females and four males, and collectively, they represent a number of ethnicities, including African American, Mexican American, Puerto Rican, Asian, and white. In this paper we present these case studies as representative of themes we found emerging from our larger corpus of data.

Initial survey results

We report on results from the initial surveys to provide context on youths' suspension of activities for this interview study. In Wave 1, we asked each young person to answer the question, "What is something you do that you enjoy and get better at, the more you do it?" Youth filled in an interest-related activity. In Wave 2, we re-presented that same activity to the youth and we asked them if they still engaged in the activity or not. A majority of youth with responses, 180 (71%), reported that they were still doing an activity while a minority, 74 (29%) reported changing their activity. Twelve youth did not respond to that question. All 74 youth provided some written explanation of why they stopped participating in their Wave 1 activity. By far the most common reason youth cited for stopping the activity was a conflict in their schedule or lack of time (n = 26). The next most frequent reason was a change in priorities or level of interest (n=20). We seek to provide depth to these explanations of suspension in this interview study.

Sources of data

We analyzed the data over a 7-month period which included constructing, administering, and analyzing interviews paying close attention to the ways youth talked about their interests and the influence of the greater world around them. Our interview protocol was informed by Dreier (2008), who argues that while people are usually studied within one context, researchers need to attend to how persons' participation unfolds in time and across contexts as they socially act in multiple settings. The protocol was constructed with the goal of collecting articulations of youth's experiences with interest related pursuits. 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. This change over time, as youth described it, was influenced by disruptions and subsequent frustrations related to the various constraints youth faced when pursuing their chosen interest related activity.

Procedure

Our team interviewed the 54 youth who agreed to participate throughout summer 2015. The interviews were conducted over the phone and lasted between 45 minutes and one hour. Interviews were recorded, transcribed by an outside transcription service, and uploaded and analyzed in the software program Dedoose. During six code creation summits members of the research team participated in reading interviews and organizing codes into thematic patterns we saw across the data. Once these thematic patterns were established, we developed code constructs including parent and sub codes. Following the completion of the coding scheme, the coding of the corpus of data was divided amongst the research team. We established inter-rater reliability for all codes, with resulting Cohen's kappa ranging from 0.63 to 1.00. In this analysis, we used the codes designed to capture youths' experiences during their initial engagement with the activity and subsequent engagements with the activity. These "temporal participation" codes had inter-rater reliability measured with Cohen's kappa ranging from 0.73 to 0.84.

Approach to data analysis

Because we were interested in how young people experience disruptions in their interest related pursuits that lead them to suspending participation, we conducted analysis through a multistage process.First we coded the 54 youth interviews for the youth's relationship to their activity, their length of participation in the interest related pursuit, their duration of participation, how their participation changed and was affected over time, and how they imagined their possible future. Compiling these coded transcripts and coded data, we developed youth profile's that aimed

to trace the youth's relationship to their interest related pursuit over time. This level of analysis allowed us to see the ways in which their participation in the activity changed and was affected over time. We then created data displays for each student of initial activity, history of involvement in activity, youth articulations of disruptions, type of disruption, future goals, outcomes, and the program setting. These data displays allowed us to identify themes regarding (1) each youth's relationship to their interest related pursuit, (2) how this relationship changed over time, and (3) how their participation in the activity was disrupted by varying life circumstances and conditions. After discussing and finding agreement regarding youth's experience of disruptions and their subsequent suspension of activity, we then looked for types of disruptions occurring across the data. We then generated claims regarding these data and interrogated for other explanations.

Findings

Despite noting connections between their interest-related pursuits and their desired futures, some youth experienced disruptions in engagement or chose to suspend interest-related activities. Table 1 displays the types of disruptions youth in this study (n=54) reported experiencing. The top two disruptions youth mentioned were counted and are displayed in the table, for a total of 73 disruptions.

Table 1: Frequency of Disruptions

Type of Disruption	Frequency Count (Percent of Total)
School	24 (33%)
Material/Financial	13 (18%)
Geographical	1 (1%)
Social Support	8 (11%)
Career Feasibility	4 (6%)
Change of interest/new hobby	6 (8%)
Time	5 (7%)
No Disruption Mentioned	12 (16%)

Table 2 displays the case study youth (n = 9) who suspended their interest-related pursuits (column 2) along with frequency of participation at the time of the interview and the reported duration of engagement in the pursuit. The table also characterizes the types of conditions of practice that youth reported experiencing. These nine youth represent the top two types of disruptions experienced by the youth in our study: disruptions because of financial/materials conditions or disruptions because of educational commitments. Material or financial conditions denote instances in which youth could not participate because the material infrastructure was not available to them or financially, they did not have opportunity to participate. Educational conditions denote those in which youth reported having competing responsibilities related to formal schooling that led to limited or suspended engagement in the interest-related pursuit. Next, we examine each these conditions in depth.

Table 2: Youth and reasons for suspension

Youth Demographics	Interest-related Pursuit	Frequency of Participation; Duration	Reasons for Suspension		Desired Future
			Material or Financial	Educational	

Caila, *female, age 18, African American*	Film Editing, Film Making	Dabbling; 3 years	X		Film Maker
Cedric, *male, age 17, African American*	Music Production	Daily; 9 years	X		Rap Artist and Music Producer
Gabe, *male, age 18, Mexican American*	MC or Rapping	About two times per week; 5 years	X		MC or Rapper or TV Producer
Ike, *age 18, male*	Illustrating	Daily, 11 years	X		Graphic novel illustrator
Emilia, *age 19, female, African American*	Volunteering	Weekly; 1 year	X		Dentist
Talia, *age 17, female, American Indian, African American, Puerto Rican*	Writing scripts for media	A couple of times per year; 2 years		X	Creative Writing; still exploring options
Claudia, *age 17, female, Asian*	Playing *Starcraft*	Occasionally; 10 years		X	Physician or Medical field
Angie, *age 18, female, white*	Drawing	Not often, as a hobby; 7 Years		X	Tattoo Artist or Psychology-related career
Danny, *age 19, male*	Clubs at school	Variable; 4 years		X	Pediatrician or person working with special needs children

Loss of access to necessary material and financial resources

Many interest-related pursuits require material or financial resources to engage in them. For instance, youth may need access to a car to drive where public transportation does not go or access to pursuit-specific training or materials, such as video editing software. Youth in our study reported both types of barriers to participation in their interest-related pursuits. Youth who experienced financial and material barriers to participation named specific circumstances of their lives that led them to suspend their participation. Emilia, for example, while in high school enjoyed volunteering but was unable to pursue it more seriously because she lacked access to transportation. She emphasized this point when she explained that once in she was in college, she volunteered more frequently because her sister attended the same college and had a car that she offered to ease Emilia's issues with transportation to the homeless shelter.

Suspension of interest-related activities also occurred for youth in our study when life conditions stemming from family income required youth to take on extra responsibilities to support their parents or younger siblings. Gabe reported suspending his rapping activities whenever he needed to take care of his little brother and sister. He told us, "sometimes my parents work a lot so sometimes I need to help. I feel like chores too [get in the way]. I'm the oldest one, in a way I have to put in more work." Gabe suspended his participation in his interest-related activity because he prioritized providing support for his family at home.

Related, youth reported instances where they suspended their activities because they no longer had access to the material resources necessary for that specific pursuit. Often these pursuits -- related to new media arts or digital arts -- required computers and other technical equipment. Cedric, an aspiring rapper and music producer from Los Angeles, made beats and wrote and recorded raps to go with them. He started making beats in elementary school when his school allowed him to bring home a computer to work on. A desire to record rap music drove Cedric and he lacked funds to buy beats made by other producers so he made the beats himself. Sometimes he

sold or licensed his produced beats to other rap artists, but when we talked to him, he was working on his own album for the first time. He stored all his beats on his computer but then he lent his computer to his little brother who broke the machine. They were not able to recover the files. He lost all the beats for his album and suspended his practice. Eventually he was able to negotiate with his mother to borrow her computer to start anew on his album. Cedric's suspension of activity was relatively short because he was able to share material resources within his family to restart the work.

When we interviewed youth, we asked them what barriers they expected to encounter as they pursued their future goals. Some youth who wanted to pursue their interest-related activities in the future imagined they would face financial barriers to participation. For example, Caila, described her future goal of becoming a filmmaker:

> The money aspect of it is a lot. Like you do have to buy a lot of your own supplies in order to set up that portfolio that do. You do have to buy a lot high technology and have large support from family, probably most likely your Mamma who's going to be buying the software for you. Then there's no guarantee that you might be a professional in the field or you may actually be good at what you do.

Calia was actively looking for universities where she could apply to a reputable film making program but she was not spending time film making at the time because she was no longer eligible to participate in her afterschool program where she primarily worked on films due to her age. Even though Caila did not stop pursuing a career in film production, available resources are a worry for her as she prepares for her future, signaling their salience as a key condition for pursuing an interest toward a career. Other youth described how expectations for future earnings led other people to expect them to suspend interest-related pursuits because "you need money to live". Ike, a graphic illustrator, reported that people in his life were not supportive of his time spent on illustrating because they expected him to make money, asking him "why work after something when you don't really get paid for it?" While this did not cause Ike to suspend his illustration work, he expected to encounter this tension in the future as he pursued his goal of publishing graphic novels.

Prioritizing formal school

In addition to the material and financial barriers and obstacles experienced by some youth, we found that other youth in our study suspended participation in an activity because of education-related responsibilities. School commitments like taking AP and honors classes, homework responsibilities, and college applications manifested in a lack of time for additional pursuits and often drove youth to suspend their interest-related activities. We understand this suspension of activity as being connected to the necessary attention youth felt they had to pay to school as a means to work toward their imagined future to attend college and become successful in context of their communities and greater world.

Talia, a youth who participated in a New Media Arts program that taught her to write scripts for new productions and supported her skill development, described homework as getting in the way of her ability to attend the program and write scripts. She told us: "I had to choose either homework or [going to the program]." When we pushed further, Talia explained that it was AP English specifically that took time away from writing scripts. For Claudia, a youth in our study who played the videogame *Starcraft* told us that exams got in the way of her game play, as well as "big projects that teachers give, and the homework that, most of the time, could get into the way." At one point *Starcraft* was a large part of Claudia's life but like Talia she suspended her participation because it took "time away that [she] could be more productive" and do her work that was integrally related to her desire to become a physician.

Angie, a youth interested in drawing, described similar sentiments to Talia and Will:

> What's different is that I kind of dropped doing it because I'm more focused on school right now. I wish I had more time to be able to do it, so I can get better. I always thought I would get a career in art, but that dream has died off. I didn't really know it was worth it anymore, so I kind of pushed it back, and I guess that's the only difference.

In the case of Angie, we also see the way in which her focusing on school intersects with her commitment to drawing as a worthy future pursuit in terms of a career. When asked what sort of future careers illustrating prepared Angie for she described:

I honestly don't even know. I thought I was going to have a career with drawing; I just never went that way. Other interests and schooling got in the way. I never really branched out because I really don't know where I could go with it and what I could have from drawing other than a nice hobby to have.

Angie's lack of seeing a pathway to pursue illustrating as a future career in addition to her school commitments are significant. This example demonstrates the ways in which doing well in school or attending to schooling is driven by seeing a clear pathway into a future a career.

Discussion: Conditions of practice and desired possible futures

The conditions of practice that youth experienced – lack of access to material or financial resources or conditions characterized by commitments to schooling – varied among the youth in our study and affected their interest-related pursuit trajectories in different ways. For the first five youth in Table 1, interest-related pursuits were integral to their desired futures. For example, both Gabe and Cedric spent time working on rapping and music production and told us about the work they were doing to pursue music production as a career after college. The second set of youth shown on the bottom half of the table (n=4) described desired futures and careers different from or loosely related to their desired possible futures. Talia, for example, pursued script writing for digital media production in her afterschool program and she was still exploring options for her future. She was considering something related to creative writing -- a transformation of her previous line of practice. In general, youth who experienced suspension of interest-related pursuits due to loss of access to material or financial resources tended to pursue lines of practice toward possible futures directly related to their interest-related pursuit. In contrast, youth who experienced suspension of pursuits for educational careers saw their interest-related pursuits as more of a hobby than a possible future.

Contributions and implications

Interest-related pursuits are ever-changing and re-locating as youth navigate the circumstances of their lives. Azevedo (2013) describes this navigation as something people must organize in order to pursue an interest, "being interested in a practice requires weaving it with many other concerns, domains, values, goals, and practices in one's life space, which makes the practice of interest meaningful in the short and long hauls" (p.44). We are concerned with the circumstances that are out of youths' control and where this weaving or organization disrupts interest-related pursuits. We find in this study some circumstances that disrupt youths' pursuits that are related to the pursuit of alternate, socially valued goals such as advancing one's schooling. But in other circumstances, restricted access may be limiting possible future opportunities.

What does those mean in the long haul for youth who are working toward better socioeconomic outcomes and desirable resources? We need to elevate in a theory of interest-related pursuits the conditions of practice that enable and constrain those pursuits and that disrupt them. We argue German-Danish critical psychology lends this perspective to describe the key conditions of practice for youth persistence or suspension of interest-related pursuits and how these conditions lead to shifting engagement in youths' pursuits of desired futures and resources. This lens allowed us to theorize the connection between youths' interests and their future careers. People who design for and support youth in their interest-related pursuits need to attend to the key conditions that lead to disruptions in youths' practices as well as recognize and mitigate the ways in which life circumstances affect participation across contexts of youths' lives.

References

Azevedo, F. S. (2006). Personal excursions: Investigating the dynamics of student engagement. *International Journal of Computers for Mathematical Learning, 11*, 57–98.

Azevedo, F. S. (2011). Lines of practice: A practice-centered theory of interest relationships. *Cognition & Instruction, 29*, 147–184.

Azevedo, F. S. (2013). The tailored practice of hobbies and its implication for the design of interest-driven learning environments. *Journal of the Learning Sciences*, 22(3), 462-510.

Bathgate, M., Schunn, C. D., & Correnti, R. J. (2014). Children's motivation towards science across contexts, manner-of-interaction, and topic. *Science Education, 98*(2), 189-215.

Barron, B. (2006). Interest and self-sustained learning as catalysts of development: A learning ecology perspective. Human Development, 49, 193–224.

Brown, A. L., & Campione, J. C. (1996). Psychological theory and the design of innovative learning environments: On procedures, principles and systems. In L. Schauble & R. Glaser (Eds.), *Innovations in learning: New environments for education* (pp. 289–325). Mahwah, NJ: Erlbaum.

Dreier, O. (1997). Subjectivity and social practice. Aarhus, Denmark: Center for Health, Humanity, and Culture.

Dreier, O. (2008). *Psychotherapy in everyday life*. New York: Cambridge University Press.

Dreier, O. (2009). Persons in Structures of Social Practice. *Theory & Psychology*, *19*(2), 193–212.

Greeno, J. G. (2006). Learning in activity. In R. K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp. 79–96). New York, NY: Cambridge University Press.

Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. Educational Psychologist, 4(2), 111–127.

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, B., Rhodes, J., Salen, K., Schor, J., Sefton- Green, J., & Watkins, S.C. (2013). *Connected Learning: An Agenda for Research and Design*. Irvine, CA: Digital Media and Learning Research Hub.

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.