

# Improvisational and Shifting Identity Work through Video Production: Two Afterschool Science Clubs' Orienting of Youth Towards New Social Futures



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## Abstract

In this poster, we explore the kind of emergent learning and identity work engagement in the production of youth interest driven science documentaries supported within two afterschool science clubs in high schools. We are particularly interested in developing further the notion of emergence of identity through engagement in youth centered and youth driven science supportive of youth agency and the tinkering with science. We explore identity work in three ways. First, to gather insights into the improvisational and shifting identity work video production supports, we explore youths positioning across three sites - the production, image and audiencing - that video making calls for and a visual analysis of the video product offers (Halverson, 2010; Rogers et al., 2010). Second, we focus on the social interactions and the manner the discursive practices in the club constitute the kind of positioning of selves in situ (Davies & Harré, 1990). Third, through a focus on ways youth and instructors "engage in acts of exploring, translating, positioning and responding" we also aim to understand the kinds of social futures the video productions orient the youth towards (Penuel & Bell, 2011). Taken together, we are interested in understanding identity work in the moment and as constantly in the making, but also how the clubs facilitate the transformation of youths' potential identity trajectories. Our approach to the study of identity work is grounded in sociocultural and literacy theory with a special emphasis on multiliteracies, building on notions of bodies, texts and emergence as constitutive of identity in the making (Leander & Boldt, 2012). Building on the work of Holland, Lachicotte, Skinner and Cain (1998) and work in literacy studies, we are interested in "how identities are formed (improvised) in the flow of historically, socially, culturally and materially shaped lives" (Rogers et al., 2010, p. 300). We draw on a video ethnography of two science clubs in high schools, analyzing twelve weeks of data that led to a collaborative video production. We rely on data gathered through a video-ethnography; interaction analysis of dialogue in situ; and a content analysis of interviews and focus group meetings and artefacts. We show in what ways the clubs were supportive of hybrid unsanctioned literacy practices in which youth became critical producers of media by intermingling everyday and school science next to critical readings of their worlds. It supported improvisational and shifting identity work as creative media producers, as youth who are capable of taking on the shared responsibility and develop the skills needed for collaborative video production. They became experts on issues tied to biodiversity that they developed over time and through fieldtrips in their community and visits of informal science venues, helping them think of self in relation to science and their community in new ways. It made them envision themselves as youth who can succeed, be creative in science and pursue learning life-long, despite their history in person as first generation immigrant youth living in underserved communities whose school science practice implied worksheets and quick travel among a vast range of science topics without time for deep engagement or reflection.

## Theoretical Grounding

We explore the kind of emergent learning and identity work engagement in the production of youth interest driven science documentaries supported within two afterschool science clubs in high schools. We are particularly interested in developing further the notion of *emergence of identity* through engagement in a youth centered and youth driven science practice supportive of youth agency and the tinkering with science driven in part by the co-production of video documentaries of science.

Building on the work of Holland, Lachicotte, Skinner and Cain (1998) work in literacy studies by Rogers et al. (2010), we are interested in "how identities are formed (improvised) in the flow of historically, socially, culturally and materially shaped lives" (Rogers et al., 2010, p. 300). We conceptualize identity as something always in the making and as an ongoing process, constrained and driven by structural features and society, marked in complex ways by history, power and politics, yet also mediated simultaneously by the individual and an individual's agency, creativity and imagination or play with available subject positions and resources at specific times in place and in spaces of authoring and social interactions.

"Improvisations are the sort of impromptu actions that occur when our past, brought to the present as habitus, meets with a particular combination of circumstances and conditions for which we have no set response" (Holland et al., 1998, p. 17-18). As noted further, "improvisations are the openings by which change comes about from generation to generation"... "individuals are always (re)forming themselves as persons and collectives through cultural materials created in the immediate and more distant past" (p. 18).  
 •We assume that improvisations take shape in changing practice.  
 •We also assume that an individual's history influences improvisations, making some positions available and not others.  
 •Finally, the significance of improvisations or departures from the common path are not always evident yet interesting to disentangle in and through research, as we attempt here.

## Research Focus

### Improvisation and Shifting Identity Work through Science Video Productions, explored in three ways:

- 1. Video Product:** First, we explore youths' improvisations across three sites - the production, image and audiencing - that video making calls for through a visual analysis of the actual video production (Rogers et al., 2010; Rose, 2007). We pay particular attention to the mise-en-scène, the sound and the editing & combination of filmic elements through transitions (Halverson, 2010).
- 2. Process:** Second, we focus on the *social interactions* and the manner the discursive practices in the club constitute *positioning of selves in situ* and improvisations (Davies & Harré, 1990).
- 3. Social Futures:** Third, through a focus on ways youth and instructors "engage in acts of exploring, translating, positioning and responding" we also aim to understand the *kinds of social futures the video productions orient the youth towards* (Penuel & Bell, 2011).

## Results: 1. Analysis of Video Product in Terms of its Mise-en-Scène, Sound, Editing and Combination of Filmic Elements

School A: *The Impact of Invasive Species on Threatened Species in Urban Space*  
 Excerpt below 2:15min (total length 7:25min), all along same electronic music typical of science documentaries; text (at times multiple ones following one another) & scientist offer explanations and science content.

Introduction to Science Club: What is it, why do you participate in it?  A slide of text: "club implied the participation of 9 youth"	Title of movie: <i>The Impact of Invasive Species on Threatened Species in Urban Space</i>  1. <i>Urban Ecosystems</i> Marc & Mellan 2. <i>Threatened Species</i> Ines, Lydie & Youssa 3. <i>Invasive Species</i> Lara, Marina, Alice & Kathy  Do you know what an urban ecosystem is? It's about species that live in the city	Urbanisation changes the biodiversity of plants via different mechanisms like the transformation of the habitat and changes of the environment through the introduction of species.	Talk of green corridors that help species move about in urban spaces.  Threatened species (title): <i>Threatened species are endangered species.</i>	Interview of scientist: "Can you think of some examples of endangered species in the urban context?"  Clip from interview with scientist; his answer is then followed by a summary in text form and picture from fieldtrip of hands of youth with text about human impact on the environment.
0:43min	0:24min	0:21min	0:08min	0:98min

## Methodology

Participants: Club A: 9 youth (7 girls; 2 boys) Club B: 11 youth (1 girl; 10 boys)

Name	Country of birth		In Canada since:	Language spoken at home	Other languages	Age
	Father	Mother				
<b>SCHOOL A</b>						
1. Youssra	Tunisia	Tunisia	11 yrs	French	NA	13yrs
2. Ines	Morocco	Morocco	3 yrs	French/Arabic	NA	14yrs
3. Lydie	Burkina Faso	Burkina Faso	5 yrs	French	Mossi	13yrs
4. Marina	Lebanon	Lebanon	6 yrs	Arabic	French	13yrs
5. Mellan	Russia	Ireland	11 yrs	English	French	13yrs
6. Alice	New Brunswick	Québec	5 yrs	French	NA	13yrs
7. Marc	Québec	Québec	NA	French	English	14yrs
8. Lela	Mexico	Mexico	10 yrs	Spanish	French/English	14yrs
9. Kathy	Québec	Québec	NA	French	English	13yrs
<b>SCHOOL B</b>						
1. Khiam	Vietnam	Vietnam	NA	Vietnamese	French/English	14yrs
2. Jian	Cambodia/China	Cambodia	NA	French	Khmer	13yrs
3. Vishmi	Sri Lanka	Sri Lanka	11	English	French/Tamil	13yrs
4. Tharindu	Sri Lanka	Sri Lanka	11	Tamil	English	13yrs
5. Moustapha	Senegal	Senegal	5	Wolof	French/English	13yrs
6. Kyle	Philippines	Philippines	NA	Tagalog	French/English	13yrs
7. Oussama	Algeria	Algeria	12	Arabic	French	13yrs
8. Yasmine	Tunisia	Tunisia	7	Arabic	French/English	13yrs
9. Younousse	Senegal	Senegal	2	French	Senegalese	13yrs
10. Madhusan	Sri Lanka	Sri Lanka	5	Tamil	French	16yrs
11. Salim	Morocco	Morocco	6	French	English/Arabic	13yrs

## Club Meetings

School A: During lunch-time, approx. 60 minutes for lunch & science  
 School B: After school, 90 minutes  
 Two instructors, one researcher.

## Data Collection:

Fieldnotes & video-ethnography of a 12 week unit (approx. 16 hours of video) tied to the creation of a collaborative group video, including two fieldtrips; documents used by instructors; pictures taken by youth and notes by youth.

## Data Analysis

- 1. Video documentary** analyzed in terms of its production, image and audiencing (Rose, 2007); analysis in terms of phases, transitions, editing, combination of effects (Halverson, 2010); focus on improvisational and shifting identity work evident in these data sets.
- 2. Mode of inquiry:** Inquiry driven engagement with science. Content analysis of fieldnotes (Spradley, 1980); Interaction analysis with transcription of telling examples of meaning making and identity in practice (Jordan & Henderson, 1995). Explore dialogue in terms of positioning work happening as youth are in interaction with each other in teams or as a whole group (Davies & Harré, 1990); look for traces of improvisational and shifting identity work over time (Holland et al., 1998)
- 3. Voicing of social futures the activity and video production supported:** Through content analysis of fieldnotes, interviews (youth, instructors and school staff) and focus group interviews (youth with instructors), we explored what kinds of social futures the video documentary project oriented the youth towards.

## School B: Deforestation

Excerpt below 9:10min (total length 15:44min, including a blooper of 3:00min); music mixed: electronic rap for intro; bird songs during documentary and Hip-Hop for blooper; text, scientist & youth voices for explanations and science content.

Introduction of team with still shots of all youth, two at a time for the most part.	Deforestation - 4 parts 1. History of deforestation* 2. Forest Industry 3. Impact on Moose, Caribou and Wolf 4. Puma - special *done by two instructors	Scientist & Written Text: Industry & Why Deforestation? -to make money -products and creation of employment; -transformation of wood for construction Example log house, paper. What can we do? Plant trees... (assumed by Salim)	Effects on animals: issue of competition for resources; talk about why caribou used to be hunted and why now caribou hunting is forbidden given their endangered species status. Deforestation is not as big an issue for moose and wolf as for caribou.	Moose and their antlers (Fassine): Scientist is asked how a caribou keeps its antlers - scientist explains how they grow in the spring and fall off at the end of each season.
0:52min	3:30min	2:22min	1:36min	0:51min

## Results: ... Youths' Authoring of Selves as Creative Media Producers

### School A: Introduction to Video & Pictures from the Club

Yusra: We like it  
 Marian: We like science  
 Yusra: We like to know more about science, giggle  
 Both: It's not a joke!



### School B: Costumes & Bloopers with Harlem Shake in Restroom



## Results: 2. Social Interactions and Positioning of Selves in Situ, Supportive of Improvisational and Shifting Identity Work

### School A: Positioning of Youth as Experts

Instructor: Alice, you did the video documentary on waste, and you made the comment now, that there is a lot of waste and pollution in this park, do you think it has a big impact on the animals in this park?

Alice: Yes. There is a bird, who made his nest with dog muck.  
 Instructor: Oh yes, so you have seen the impact, but we do not know if that affects birds in any way, right?  
 Kathy: Well, the bird did an excellent job, the bird did an excellent job integrating these wastes into the nest, there was even a string (piece of rope from boats probably from the river), the string was like attaching the nest to the tree. It was really interesting to see. (see picture on left below)  
 Instructor: Really, wow!  
 Kathy: It went around the tree and there was sort of like a knot, I was like really impressed...  
 Instructor: A loop?  
 Kathy: Not really a loop but just like a knot so it would hold.  
 Marc: Very crafty!  
 Kathy: What I learned from our fieldtrip? Well, I learned that birds made their nest with all the things they could find!

### School B:

#### The Challenge of Assuming an Identity as a Filmmaker & Media Producer

Yassine: How do I erase this? How do you erase this?  
 Instructor: You want to erase this (you meaning whole group)  
 Yassine: Well, it's me who wants to erase this.  
 Instructor: Everything?  
 Yassine: Yes!  
 Instructor: But you would need to ask the others, the one's in charge of this section if that's ok with them  
 Yassine: No, I want to erase it, erase it. I want to erase it right now. Erase all of it. I do not want, I don't want, I am sick of it. I am sick of my face. I don't want to have my face shown on there.  
 Instructor: How come?  
 Yassine: I don't want to, I don't like that.  
 Instructor: But it's you who decided to do the interview  
 Yassine: Yeah, but I thought I was just helping the others but, I didn't know that this would mean my face would be like that. I don't want to.  
 Instructor: You don't want to, you don't want to be seen in the video?  
 Yassi: No, I don't want to... [later] each time they see me, they laugh about me. I don't want, you understand?  
 Instructor: But, it's like, we didn't laugh about you, we laughed because it was funny but we are not laughing about you, you should not take that personal. You were clowning around, it was funny! You were having fun, and you were, you were like dressed up, disguised, and it was to make everybody laugh.  
 Yassine: Yeah, but the people behind the camera, I don't want anybody to see me, it gets on my nerves!

## Discussion

**Video Product:** Analysis of the video production makes evident multiple personal appropriations and improvisations that video production supported. The multimodality of each video next to its unique script and youth ownership of the topic of the video was supportive of identity shifts among some youth towards media producers and creative users and communicators of science.

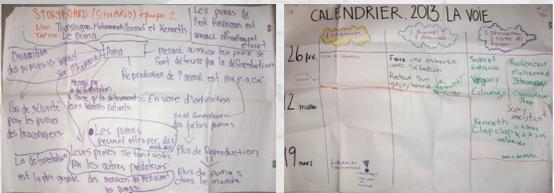
**Process:** Media production is a valuable tool to engage youth with science yet has to be embedded in a rich fabric of educational activities and grounded in inquiry science. Once we examined the different activities production implied over the 12 weeks, we could get a much richer picture of the many learning opportunities and moments of improvisations and shifting identities the work in teams and as a whole group supported.

It was not without its challenges, however. Instructors were sometimes solicited to smoothen out disagreements among team members about what should be included or excluded. It helped youth develop both, "person-based" and "process-based strategies" (Barron et al. 2014, p. 259).

The study also supports the idea that "sustained social relationships with peers and mentors are essential for learning" (Barron et al., 2014, p. 275). It led some youth to temporarily position themselves as technology savvy, as experts in science content tied to their documentary and as creative media producers.

Time	Activities
Week 1	Brainstorm: What does biodiversity mean
Week 2	Fieldtrip 1: Botanical Garden, Center of Biodiversity & Insectarium
Week 3	Discuss fieldtrip; develop topic of group video production
Week 4	Organization of production, sub-division into teams/themes
Week 5	Research on science content; calendar of tasks; storyboard
Week 6	Filming for documentary: Visit by scientist
Week 7	Video editing 1
Week 8	Video editing 2 Peer critique of video clip produced so far
Week 9	Video editing 3: Putting the three video clips of the teams together into one video, work on timing, fluidity, cut out long sections, add music, work on sound and transitions; watch & critique to improve
Week 10	Fieldtrip 2: Club A: Visit a green space close to a river, close to school. Club B: Visit of Biosphere (Museum of environmental issues)
Week 11	Video editing 4: Last day of editing work; final touches on video.
Week 12	Video editing & sharing 5: Finalize documentary; watch it together.

## Creation of Artefacts & Improvisational Identity Work



Time	Description of Artefact	Whole Group	In teams	Alone
Week 1	Brainstorm of ideas tied to biodiversity	X		
Week 3	Pictures of biodiversity taken by youth		X	
	Powerpoint with pictures from fieldtrip		X	
Week 4	Brainstorm theme of video and sub-themes/groups	X		
Week 5	Calendar & Storyboards	X	X	
Week 6	Questions for scientist			
Week 8	Written critique of video	X		
Week 9	Written critique of video	X		
Week 10	Pictures taken for video & art piece	X		
	Notes in a personal journal			X
Week 11	Group feedback on video	X		
Week 12	Watching videos together; last critiques	X		

## Results: 3. What Kinds of Social Futures Did Engagement in Video Production Orient the Youth Towards?

### Value of Collaborative Video Project – Shared Responsibility & New Skills

•Alice, School A: I am now better with computers, I used to be such a dork.  
 •Yusra, School B: I enjoyed the collaborative project. That way, everybody had some ideas and we could all talk to each other and discuss things. Everybody had a task and had a responsibility in it. It was like OUR documentary. That's why I enjoyed it.  
 •Kyle, School B: It made me communicate (talk) more and better with others.  
 •Instructor: I really liked that collaborative video, because it was a neat way to put pressure on them to work on their video; because we were able to explain what the big goal [was], and that they know that their part is required for the final portion, but I think that it encouraged them to work a little harder on it. So I think there's maybe pressure from the peers. I think that helped a lot, as opposed to their own projects, where there was just pressure from us, instructors.

### Value of Thinking about Science and Engaging with Science in New Ways

•Alice, School A: In science class we always do worksheets, each time on something different, in the club we did projects and many activities and topics were related, I prefer the science club over science class.  
 •Kyle, School B: I really like science since I am a small child, but what I liked most in the club is doing science and all the activities without constraints, without constantly being looked at by others, being noticed by others, there was more freedom to just do science.  
 •Instructor: I think the club may have helped them transition, allowing them in some way to think about bigger subjects, and just taking the time to think about different issues, especially when it comes to science, be more open-minded about stuff and critical, ask questions...

### Value of Making Connections between Science and Community

•Yusra, School A: The fieldtrips were like the best, we could do what we wanted, well you know, what I mean, it's just fun, you know, the projects we do, together, I like working together. It's cool, we always have something to talk about... and my mother encouraged me to go on the fieldtrip and see with my own eyes instead of just talking about it in class... or in the Botanical Garden, it was amazing, I felt like in a real forest yet I was still in the city.  
 •Instructor: So for School A, the fieldtrip to the park, I think it was pretty effective, because we were talking about pollution in urban areas and were able to see a bunch of things first-hand, and were able to see bird nests with garbage incorporated in them, and I think that had a much bigger effect on the kids than talking about it, because they were able to see first-hand part of their area, and they probably like "wow, I figured some of this out, and look where it goes." So I think it was pretty neat that they were able to see, take the time to look at nature and their urban environment, and make connections.

## Discussion – continued...

**Social Futures:** In school B, many youth struggled with French and alluded to the ways the activities helped them become more self-confident learners, public speakers and improve their communication skills.

Youth appreciated the challenges club participation implied – being positioned as experts in science and as creative video producers; as capable of working in a team towards a common goal in responsible ways. It suggests that participation gave them access to new imagined selves in the future. It helped them envision themselves as youth who can succeed, be creative in science and pursue learning life-long, despite their history in person as first generation immigrant youth living in underserved communities whose school science practice implied worksheets and quick travel among a vast range of science topics without time for deep engagement or reflection.

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