Shifts in Identification in a Hybrid Space

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Abstract: In a hybrid space where people enact multiple identifications across time and space, this paper examines the question of why and how students shift from one identification to another in school. Through a design-based research in a high school physics classroom enacted to bring about a convergence of students' out-of-school discourses and school-based discourse, I analyzed the nature of identification undertaken by some students as they navigated multiple discourses. Using Bakhtin's work as an analytical frame, I suggest that shifts in identification should be seen as a temporary appropriation of a dialogic other's voice (or ideological stance) and suppression of one's preferred voice that is performed strategically according to one's situated interest at any particular point in time.

Introduction

In today's pluralistic and digital age, we are living in a hybrid world where we interact with multiple cultural systems and worldviews. We enact certain identifications (actions or behaviors that signal a recognizable affiliation; Lemke, 2009) within one discourse community and others within another community almost seamlessly in our daily life. In education, the tenet of exposing children to various disciplinary subjects is in essence expecting them to adopt multiple identifications affiliated to certain socially privileged communities. Yet, by the time most children enter formal schooling, they have already formed other identifications, some of which may present obstacles to their learning of a school-oriented identification. For example, to learn science is largely learning to be a scientist, and this involves learning its unique discourse (Gee, 1990), or way of interacting with or talking about the natural world (Lemke, 1990). However, there are also other ways of seeing and interacting with the natural world throughout human culture and history that constitute a different set of identifications (e.g., religion, sports). Given these multiple (and sometimes conflicting) identifications, how do students' shifts in identification take place?

This paper explores the above-mentioned question of identification shift in a hybrid space. Through a curricular intervention, a hybrid space in a classroom environment was fostered whereby the students' out-of-school discourses were directly juxtaposed with the official school science discourse. As explained by Barton and Tan (2009, p. 52), a hybrid space in a school setting is one where different discourses "coalesce to destabilize and expand the boundaries of official school discourse. Within this hybrid space, attention was given to the nature of identification undertaken by a group of students as they navigated multiple discourses, and examined why and how did some of them shifted one identification to another.

Theoretical Perspectives

Conventional thinking about identity tends to postulate a stable "essential self" (Erickson, 1968) with a durable set of psychological conditionings and social categories. This sets up an either-or distinction (e.g., expert vs. novice, scientist vs. non-scientist) that is problematic to our understanding of how people enact multiple identifications. Instead, the idea of plural shelves, which is increasingly more common, lends itself to our understanding of individuals enacting a range of identities in different contexts and for different purposes (Holland, Lachicotte, Skinner, & Cain, 1998; Lemke, 2009). While holding on to the latter model of identity, I am also interested in identity or identification shifts that occur in the moment and across timescales (Lemke, 2008) under the condition of hybridity. In this regard, I turn to Bhaha's hybridity and Bakhtin's voices to inform my work.

In his work on hybridity during colonialism, Bhabha's (1994) observes that whenever the colonizer sought to impose an essentialist discourse to shape the identity of the colonized (the Other) to become one of itself, it ended up producing something new to both the colonizer and colonized. Thus, he proposes the construction of a political hybridized subject that is "neither One nor the Other but something else besides, in-between" (p.219). Recontextualizing in educational setting, when a hegemonic disciplinary discourse like science is introduced in a classroom, Bhabha's insight provides a dynamic way of diffusing existing boundaries of established discourses and identities, and describes new possible spaces emerging from the interaction of multiple discourses.

While Bhabha's broad framework provides a new way of thinking about hybrid identities in theory, I turn to Bakhtin's *social voice* as a discursive lens for analyzing hybridity in practice. A voice is an ideological stance toward a discourse that is populated within an utterance. According to Bakhtin (1981), no utterance is completely unique and ideologically-neutral as people borrow and adapt others' voices in order to construct their own. The mixing of others' voices thus gives rise to *heteroglossia*, or the existence of speech diversity within a text or speech conversation. In other words, in any conversation, people inevitably mix the *dialogic*

other's voices into their own utterances as they respond to the preceding utterances and anticipate future responses from this dialogic other. As such, "all our utterances are filled with others' words [with] varying degree of otherness or varying degrees of 'our-own-ness'" (Bakhtin, 1986, p. 89).

Methodology

The data for this analysis are taken from a larger design-based research (Collins, Joseph, & Bielaczyc, 2004) in an Honors Physics classroom of a public high school, located in a predominantly white suburban community. In this research, a hybrid space was created through the enactment of a specially-designed curricular approach. Informed by the New London Group's (1996) pedagogy of multiliteracies, this curricular approach was enacted in the following procedure:

1. Before the start of a major curricular unit (e.g., mechanics), every student selected a text (henceforth *choice text*) he/she had read or was likely to read. While there was no restriction on the media (e.g., video, website) of this text, its content had to be related to both the student's interests and the physics unit they would learn shortly.
2. After collecting these texts, several strategies to harness the resources in the choice texts and address their differences with school-based texts were designed and implemented.
3. An assignment was then designed to guide the students in connecting their choice texts with the physics unit. The requirement was a four-page essay, which included two components. The first component was to explain a peculiar phenomenon behind the student's choice text "like a physicist" (i.e., using the language and concepts they had learned in class). The second component was to write a critical evaluation of how science was represented in their choice text in comparison to their textbook.
4. These procedures were then repeated for the next curricular unit (e.g., electricity).

Ethnographic methods (Spradley, 1980) were used to collect data in the classroom with the first author taking on the role of a participant-observer (e.g., co-teacher). The major data sources included daily videos and field-notes of classroom observations (70 lessons in total), 24 videos of student interviews, 3 teacher interviews, 63 students' choice texts, and 59 students' out-of-school texts/media. Qualitative data were analyzed using constant comparative analysis (CCA) and multimodal discourse Analysis (MDA). CCA is an inductive method that generates broad patterns and categories through a systematic comparison of specific incidents in the data (Glaser, 1965), and was used as preliminary method to organize and categorize the corpus of texts and interviews through the three stages of open, axial, and selective coding processes. This was complemented by the use of MDA to go in-depth into the discursive use of language and symbol systems in the textual, interview, and interactional data sources. The MDA approaches were informed by the traditions of SFL and social semiotics (Halliday, 1978; Lemke, 1995). Specifically, I used Lemke's (1990, 1995) semantic analysis to understand how different experiences and perception of phenomena are textually produced, Kress and van Leeuwen's (1996) "grammar of visual design" to examine how meanings are made with photographs and images, and critical discourse analysis (Fairclough, 1992) to relate intertextually these semiotic designs to larger societal and ideological underpinnings.

Findings and Analysis

From the analysis, I assert that shifts in identifications are necessary for students to navigate multiple discourses in a hybrid space. This identification shift involves an appropriation of a dialogic other's voice (or ideological stance) and a temporary suppression of one's preferred voice. However, the shift only occurs momentarily and the students perform this shift strategically in order to fulfil short-term goals.

For this paper, I present two cases to illustrate and support the above assertion. The first case involves a fifteen-year old girl whom I call Naomi. At the time of the research, not only was Naomi a high school physics learner, she was also a fan of science documentaries, a typical "A" student, an aspiring cardiothoracic surgeon, a cheerleader, and a devout Christian. For the curricular unit of electricity, Naomi selected an article from the website *answersingenesis.org*, which was introduced to her during a bible study class in her church. This article was written by an electrical engineer with a degree in Bible Theology to explain the electrical function of the human body (e.g., neural transmission) from a creationist perspective (see Savige, 1999). In a separate analysis, I have analyzed the multifaceted voices in this article, and how the voice of creationist design is dialogically opposed to that of random evolution.

In Naomi's evaluation of this article, she recognized the differences between the expectation of the article's targeted audience and that of scientists in general. Her dual identifications as a Christian and science learner were important in getting her to point out the different purposes and the "different angles" and ways of "presenting information" between the article and a science textbook. Interestingly, in her writing, despite being the targeted audience of the article, Naomi constantly referred to a generic "reader" and did not identify herself as a believer, as shown here:

> The author was trying to convince the *reader* that there was a creator behind the entire nervous system in humans, God... The author did a great job of supplying a simple explanation and opinion for an average *reader* who wants to know that there is a creator behind the electrical design in humans (*italics* added).

This deliberate shift in identification from the subjective position and immediacy of a limited first person perspective to a seemingly objective position of a distant third person perspective allowed Naomi to evaluate the differences between the creationist article and scientific texts, and was necessary in order for her to consider the point of view from scientific practices, which is an alternative voice in juxtaposition with the creationist voice she was comfortable with. Through this, Naomi wrote an explanation of neural transmission using the language and representations of physicists and biologists.

However, Naomi's appropriation of a scientific voice in her essay writing does not imply that she had permanently formed a new identification, and consequently resolved her personal conflict of evolution. In a separate interview with her, Naomi provided a telling example of how she managed the conflict and the different identifications expected of her. Despite Naomi's conviction that evolution was wrong, she managed to "pass evolution test with flying colors" and obtain an A overall for Biology. She explained that she needed an A because she "badly wanted" to be a doctor in the future. She also narrated that during the evolution test, she was frustrated and critiqued every question in her mind, while simultaneously giving the "correct" answer to each question. This suggests that in her identification shift to become an "A" science student and a prospective doctor, she suppressed external representations of her preferred voices (of creationism) consciously and temporarily for strategic reasons. Furthermore, it is unlikely that in this process, she would have to give up her religious beliefs and practices. In other words, in her dynamic negotiation of multiple discourses, she enacted her identification momentarily according to a calculated alignment between the situated circumstances and her projected goals.

In the second case, I focus on the identification shifts of two colorguard girls who were required to explain the phenomenon of colorguard tossing using the language of physicists. Colorguard is a popular extra-curricular activity in American schools and colleges where the participants use props such as poles, flags, and rifles to express dynamic movement in synchronization with the music from a marching band. An integral movement in a colorguard performance is a toss, which involves the spinning and throwing of a prop into the air with synchronized timing. This example includes a micro-genetic development of their talk with the researcher, and as such, illustrate more clearly the dynamic real-time appropriation of a dialogic other's voices in the students' utterances, and the identification shifts that ensued.

In a discussion between Evelyn and Lucy, the focus was on how physics principles were involved in a colorguard toss. The students started by explaining the process of tossing a colorguard flag and rifle into the air. In particular, Evelyn and Lucy wanted to explain how tossing a rifle and a flag were different. This explanation was mediated heavily through the situated use of their gestures (Roth, 2004), which is an important feature of colorguard Discourse. After listening to their explanations, the researcher asked them to explain in a different way by using a visual system:

Excerpt 1: Initial Tension

Turn	Speaker	Utterance & Non-verbal Actions
36	Researcher	Okay, you know what will help me a lot, and. and I think will help you as well is to. **draw what you just said**. And so I'm going to give you some pieces of paper.
37	Lucy	Right
38	Researcher	I want you to draw. whether is it a rifle or flag and. **draw some arrows** and. talk to each other, and I want to see how it goes. Okay?
39	Lucy	Right.
40	Evelyn	Okay.

As the researcher had difficulty in understanding the students' initial explanations, he asked them to "draw what [they] just said" (turn 36). This in essence was a bid for them to "textualize" (Bloome & Egan-Robertson, 1993) their embodied gestural actions into a free-body diagram, which is a specialized visual system of physics discourse. Two minutes later, the researcher left the group momentarily and Evelyn and Lucy made their sketches and commented on their drawings. At the same time, the video camera that was mounted in front of them continued recording.

With the discussion of colorguard removed from its typical event setting and situated in the physics classroom and recorded for the purpose of learning physics, Lucy in particular demonstrated an awareness of the need to employ terminology common to physics such as "height" and "rotation" instead of what is typically used in colorguard such as "gas" and "steering" to identify in with this new social ecology (Lemke, 2008).

Excerpt 2: Phenomenological identifications with new social ecology.

Turn	Speaker	Utterance & Non-verbal Actions
57	Evelyn	Okay. So.. this is my gas.
58	Lucy	Your gas?
59	Evelyn	Well, that's how I start (*inaudible*) right?
60	Lucy	Right. So essentially.. say which hand is the gas and which hand is the..
61	Evelyn	Okay, well. my push down is the **gas** (*pushed left hand downwards*), and this is my **steering** (*raised right hand*), so.
62	Lucy	Your **height**.
63	Evelyn	My.. (*laughed*) okay.
64	Lucy	Oh no, I'm like **I'm explaining it to the video**. (*pointed at camera*)
65	Evelyn	Oh.
66		(*Evelyn drew an arrow up on left side and arrow down on right side of her figure; see Figure 1, as Lucy watched*.)
67	Evelyn	Okay, this is.. my HEIGHT.. This is my. rotation. (*wrote height and rotation next to her sketch; see Figure 1*)

In this excerpt, a critical moment took place when Lucy demonstrated her keen awareness of the Bakhtinian dialogic other, even when this "other" was an inanimate camera directed at them. Due to the "presence" of this dialogic other, Lucy made a conscious effort to translate Evelyn's colorguard term (e.g., steering) into one that the teachers could understand (turn 62). In turns 66 and 67, Evelyn then self-corrected her own choice of words from a colorguard lexicon (e.g., gas, steering) to words more commonly used in physics (e.g., rotation, height). She then included those words in her sketch (see Figure 1).

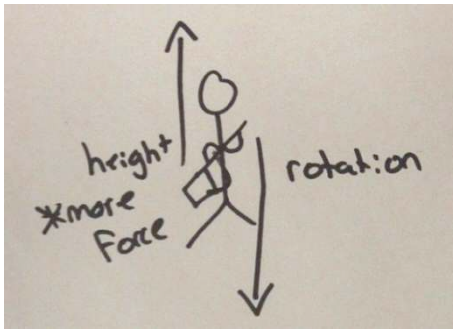

Figure 1. Evelyn's sketch of her bodily actions taken during a flag toss.

Immediately after this, Lucy, who had been watching her sketching, continued her momentary role as the teacher-facilitator in getting Evelyn to explain her actions for someone outside their colorguard discourse:

Excerpt 3: Momentary shift toward the expectation of the dialogic other.

Turn	Speaker	Utterance & Non-verbal Actions
69	Lucy	Right, so which hand uses more.. (*shook her head*) which hand. **has more force**.. if you are throwing a double?
70	Evelyn	(*Uttered a long sigh*) The height.

Turn	Speaker	Utterance & Non-verbal Actions
71	Lucy	Yah. (*smiled at Evelyn*)
72	Evelyn	Yah.
73	Lucy	Yah.
74	Evelyn	Yah. (laughing)
75	Lucy	Yah
76	Evelyn	(*Uttering to herself as she looked at her sketch*) This hand **has.. more force..** (*wrote more force on right side of diagram*) (*whispering*) **I don't know why..**
77	Evelyn	Cos if I. if it doesn't, then it's just gonna.. be too low
78	Lucy	Or.. Going to the ground if you use too much of the.. left hand than the other hand
79	Evelyn	Right.

Lucy's momentary role as the teacher-facilitator was evident from the I-R-E (Initiate-Response-Evaluation) she was enacting with Evelyn in the above excerpt. In turn 71, Lucy's followed up response of "yah" shows that the answer to her earlier question in this exchange structure (turns 69-71) was something that was already obvious to both of them. Evelyn's sigh in turn 70 and their back-and-forth strings of "yah" and smiles from 71 to 75 further show their mutual awareness that they were simply enacting this exchange for the dialogic other. This I-R-E exchange subsequently prompted Evelyn to say in (76) and write down "more force" next to the sketched right hand (see Figure 1). She then pondered why that was so and subsequently postulated a reason. After 8 seconds of looking at her drawing, she started to answer her own question by stating a possible outcome that it would "be too low" if less force was exerted (77). This was then followed by Lucy suggesting another probable outcome in turn 78. Throughout these two exchanges of I-R-E sequences (from 69 to 75) and self-question-and-answer (from 76 to 78), it was as though they were anticipating what the teachers would say to them if they were present. In other words, they dynamically shifted their identifications as they appropriated the voices and expectations of the dialogic other in their momentary utterances.

After the discussion and the completion of the essays, Evelyn and Lucy were interviewed to trace the development of their ideas to their essay writing. A key finding was how they were also able to momentarily suppress their preferred voices, styles, or stances in exchange for some incentives (e.g., academic grades). A case in point could be seen in how Lucy and Evelyn, in the course of fulfilling their assignments, had to adopt a reductionist stance to simplify their elaborate and colorful sport into abstract terminologies, symbols, dots, arrows, and numbers. Lucy for instance deliberately made her writing "boring" despite her self-identification as a creative writer as she desired a good grade for the assignment:

> It's boring because I just needed to like. I knew I have to get my point across without saying like. without getting into like describing. like it doesn't matter what color it is. It doesn't matter if it is fun or not. Like it's just. the information, and um... I was just being very basic like.. if I was to read this out loud, I will read this in a monotone… like even in the text I was using, she was like a little more fun with it, like 'she drops, the band director would commit murder' that sort of thing. But I was trying to avoid that, just because I know it was an educational text (italics added).

In Evelyn's case, she deliberately included more mathematical equations because she saw herself as "really good at math" and knew that one of the criteria for an A was to use relevant and accurate equations:

> When I think, I think very math-like, so this class is kinda hard for me because I know the math part, I do know pretty good the math, but the concept of it, it kinda trip me up. So like the scientific explanation, mine has a lot of equations in it, and it was mostly math, and I felt. I thought he [Brian] was going to be more like grade me a little bit higher because I knew I did so much math (italics added).

These examples highlight the active resourcefulness of the students in strategically shifting their identifications by momentarily appropriating a dialogic other's stance and temporarily suppressing one's own. Furthermore, they did so in order to fulfil their short-term goals as they navigated across the different discourses within a hybrid space.

Conclusion

This paper provides insights into how young people enact multiple identifications in a hybrid space. Contrary to a stable "essential self", my findings suggest that some youths could easily form hybrid identities that cater to the various discourses they find themselves in. I also found that such hybrid identities are not stable entities composed of a permanent concoction of two or more initial forms of identity. Instead, they are fluid states that are performed strategically according to one's situated interest at any particular point in time. This characterization is also supported by Gee's (2000) argument that today's well-off teens, whom he described as "shape-shifting portfolio youths", pick up a variety of experiences, skills, and achievements, (and I would add, voices and identifications), and are able to rearrange them dynamically and creatively for different circumstances.

One implication of this study is that instead of seeing identity or identification as a categorical frame that describes and confines people according to various social categories, it may be useful to consider identifications as resources or "toolkits" that people use to get by in their everyday life of negotiating multiple discourses. In this regard, our findings show that adolescents, by a certain age, have developed the ability to recognize and harness the appropriate identification toolkits to deal with the various discourses in schools. Nevertheless, an important qualification in this study is that these are relatively privileged suburban youths who have the social conditioning and dispositions (Bourdieu, 1984) to do well academically. What this would mean for other youths who lack the cultural capital and who may resist the identification shifts expected of them needs to be further explored.

This study raises several fundamental questions for future study and re-thinking of what is learning. First, how does a dynamic view of identification shift for strategic purposes inform or challenge current views of how people learn, particularly those that postulate learning as the exchange or transition from one stable form to another? To what extent is the calculated exchange of socio-economic goods (e.g., grades, career opportunities) lacking in constructivist theories of learning, and needs to be taken into consideration? Lastly, how can we change classroom research and practice as educators foreground students' agency in using identifications as dialogic resources to get by their everyday life, instead of seeing students as passive conformers of certain stereotypical social categories? These questions could help us reexamine our work of identifying how students identify themselves through an essential but daunting process that we call schooling.

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