Supporting Communication and Argumentation in Urban Science Education: Hip-hop, the Battle, and the Cypher

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Abstract

This paper is based on an exploration of communication and argumentation in urban science classrooms, and provides a description of the role that Hip-hop based education plays in supporting these major components of science education. The paper is intended to both support, and critique conventional uses of hip-hop based education, and provide insight into the rap battle and the hip-hop cypher; two under-focused upon aspects of hip-hop culture that have tremendous pedagogical potential.

Keywords: Urban Science Education, Hip-Hop, Battle, Cypher

INTRODUCTION

Much academic work that considers hip-hop as a tool for improving instruction has considered rapping about a topic, or using rap lyrics as text to be studied as the primary model of hip-hop based education (Hill, 2009; Morrell & Duncan-Andrade, 2002). This process usually involves the creation of raps (sentences that rhyme and/or have a particular cadence usually performed over rhythm,) that contain academic content and/or the use of lyrics from rap songs to become the anchors of classroom lessons (Powell, 1991). While these efforts to bring rap into the classroom reflect a step in the right direction in regards to utilizing

hip-hop as a tool for instruction, the use of rap lyrics as the sole piece of hip-hop based education has become such a widespread practice that it truncates the potential of hip-hop culture to truly reflect the complexities of both pedagogy and urban youth culture. Much of what is described as hip-hop based education is merely rap-based instruction that is misnamed as hip-hop. In this paper, I suggest that while rap is an artifact of hip-hop that holds much symbolic value in hip-hop culture, it neither represents the full spectrum of hip-hopness (being hip-hop), nor the potential of hip-hop to reframe teaching and learning.

Urban youth of color, who engage in the complex and multi-modal culture of hip-hop, are often forced to engage in classrooms where the instruction is mostly uni-modal and one-dimensional (Emdin, 2011). This fact, combined with larger issues related to poverty and societal bias, cause urban youth disengagement in classrooms, and leads to low scores on conventional markers of academic success that are indicators of achievement (Corley, 2003; Felice, 1981; Jencks & Phillips, 1998).

While the creation and analysis of rap text within classrooms shows an appreciation for hip-hop culture and advancement from conventional instruction (Dimitriadis, 2001), in too many instances, it merely uses rap as a way for youth to memorize information. This use of rap as a memorization tool calls forth archaic modes of instruction like rote learning and bastardizes the potential of a cultural art form whose legitimacy as a learning tool has yet to be fully explored. I argue that the use of rap as the singular way to support hip-hop based instruction, particularly with youth of color whose culture is largely based on oral traditions with deeper meanings than words (Alim, 2004; Smitherman, 1997), misrepresents hip-hop culture, and reflects a superficial rendering of hip-hopness.

In an effort to expand the potential of hip-hop based education, I argue for the study of aspects of the culture that have yet to be fully explored in the field of education. In addition, rather than focus on the use of rap text in subject areas like English or Social Studies (as is most customary), I suggest a focus on its potential in science education. The hip-hop based pedagogical approaches I present in this paper consider the social, symbolic,

and cultural capital that students bring into the classroom as the point from which pedagogy is birthed (Freire, 1970; Ladson-Billings, 1994). More specifically, the work validates urban hip-hop youth practices as a legitimate culture, and emphasizes the capital students bring to the classroom as hip-hop youth as a key to communication and argumentation in the science classroom.

THEORETICAL FRAMEWORK

The theoretical framework that guides this work is sociocultural in nature and considers the fact that urban youth of color have a distinct culture with its own unique schema and practices (Sampson & William, 1995). It considers that urban schools have their own unique culture that is not necessarily aligned to that of urban youth (Ainsworth-Darnell & Downey, 1998). The work is also grounded in the basic understanding that culture exists, and is enacted within social fields (Bourdieu, 1993) that collide with each other as participants from different cultures interact to produce or reproduce social life (Giddens, 1984). When this collision or combining occurs, the extent to which the schema and practices of each social field blends seamlessly with the other is dependent upon the shared understandings of people from each culture (Williams, 1981). In the case of hip-hop youth and urban classrooms, the schema and practices of hip-hop and school rarely converge seamlessly. Therefore, it is imperative that we find a mechanism to facilitate connections or weak ties (Granovetter, 1982) between the culture of youth and school. Hip-hop based pedagogy serves as a facilitator of weak ties that may evolve into strong connections between youth and the subject matter over time.

HIP-HOP YOUTH IN URBAN SCIENCE CLASSROOMS

Hip-hop youth listen to and create hip-hop music, and engage in distinct hip-hop practices on a regular basis. These are youth who can be identified by their modes of talk and dress, but also their embodiment of distinct non-traditional characteristics in their everyday interactions (Kitwana, 2002). Urban youth who are

engaged in hip-hop are usually immersed in practices related to the four main components of hip-hop (rapping, b-boying, graffiti, and dee-jaying). While this paper could focus on any of these four aspects, it focuses on rapping for the purpose of expanding how that strand of hip-hop (despite its seeming oversaturation in education) has been used in a limited scope.

Communication, Argumentation, and Science Education

In contemporary science education, science talk and argumentation are two approaches to improving student understanding that consistently emerge as viable approaches to connecting them to the discipline. Brown (2005) has discussed the importance of using students' ways of communicating as a tool to expand their scientific vocabulary. In addition, Rivard and Straw (2000) have discussed the importance of both writing and talking science and their significance to scientific understanding. These studies, as well as the many others that consider scientific communication in the classroom (e.g. Ballenger, 1997; Crowder, 1996) ultimately serve to support the notion that deep communication in and about science can evolve into comfort with the subject. This work suggests that ideally, exchanges in the classroom that foster argumentation, active debate, complex thinking, deep questioning, the demonstration of mastery, and defending one's position with appropriate words and content knowledge supports true science (Driver, Newton, & Osborne, 2000).

In hip-hop, exchanges among rappers that support argumentation (i.e., active debate, complex thinking, and deep questioning) are the norm in a piece of the culture called the rap battle. In the rap battle, lyricists compete against each other and create impromptu raps that have to be coherent, insightful, and/or draw from research on the opponent in an off the cuff yet heated manner (Alim, Lee, & Carris, 2010). In these battles, participants stand before a crowd, present with followers and supporters behind or next to them, and debate against a peer while using past and present information to articulate an argument that debunks their opponent. This practice supports complex thinking, deep questioning, and keen observation about the environment.

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Consequently, I argue that a rap battle structured classroom provides students with opportunities to express skills and talents that are ideal for learning science that would not be otherwise expressed in the classroom. By using language/structures from the battle, hip-hop discourse is brought into the classroom, and hip-hop youth are provided with incentives to research science concepts discussed in class. This process provides youth with opportunities to demonstrate their mastery of scientific concepts as they get opportunities to repetitively discuss and debate them.

Science Talk and the Cypher

The cypher is a hip-hop practice where participants stand in a circle and a number of them, who rap; take turns presenting/performing until all people who are present get an opportunity to participate (Hill, 2011). In cyphers, some participants rap while others provide background rhythms that are rapped to. Others support the rappers by providing feedback when they rhyme, or supporting their raps by cheering. During cyphers, the multifaceted nature of the cultural and verbal exchanges among hip-hop youth lead to the building of camaraderie (Emdin, 2011). As rappers take turns rapping, and other participants enact their roles, certain rules of engagement that are not formally stated, but are clearly understood by all participants, get enacted. Over the duration of a cypher, unwritten rules and established norms such as subtle words and gestures that alert the person who is rapping that it is time to pass the verbal baton are enacted. Other unwritten rules such as the supportive noise made at certain parts of a rapper's rhyme, and the filling in of words or phrases when a rapper is out of breath, are also abided by.

In certain cyphers, the exchange between rappers (who may have formerly been strangers) is so seamless that the entire process appears rehearsed to people who are not familiar with the process. In most cyphers, the person who takes the turn from someone else will reference the previous person's lines, and begin rapping immediately after the previous person ends. In these types of scenarios, the rhythm from handclaps or ambient noise produced by other participants continues seamlessly and serves as a backdrop to the fluid exchanges among performers/rappers. In

cyphers, rappers mix memorized lyrics, completely impromptu rhymes, and descriptions of their realities in a turn-by-turn sharing of talents and skills. In these cyphers, there are equal turns at talk, head nods by people who are present who are not rappers, cheers by participants, and a person or group of people providing the background music for the verbal exchanges.

Lessons from the Cypher

One of the major lessons from the cypher is its physical structure. The cypher dictates that participants are organized in a way that facilitates eye contact, and has participants being positioned just about equidistant from each other. Therefore, I argue that the ideal classroom should be structured in a way that allows students to be in close proximity to each other and the teacher. The cypher teaches educators that in order to facilitate exchange among participants, the classroom should be organized in a circle, and the teacher positioned in a way that includes him or her in the classroom/cypher structure and not at the helm of the classroom. The cypher also informs educators about the need to structure the class in a way that any student, at any given time can have the floor while engaging in different activities that support the smooth functioning of the classroom. For example, there has to be the space within the classroom for a student to be working on a classroom assignment while another one is conducting a lab, and another is doing research. This set up would be analogous to the cypher where a student is rapping; another is creating the beat that is being rapped to, and another is just watching and providing feedback to the rapper.

Another significant lesson for teaching that comes from the cypher is based on studies of rappers in cyphers. By studying the ways that rappers in cyphers interact with their peers, and understanding the distinct use of language within the cypher, much information is provided to the teacher about how to interact with students, and orchestrate communication among them. In cyphers, the rapper at the helm can be compared to the teacher. This person, at the moment when he or she is leading the cypher, often draws analogies from the immediate surroundings during a rap performance. In addition, the rapper consistently ensures that the

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general emotion during the cypher is positive by making references to the words and actions of other members of the cypher during his rap. This person is also willing at any indication that another person wants to take the helm to allow that to happen.

Finally, the pace and volume of the rap is rarely consistent. In order to draw cypher participants into the rap, the use of voice is significant, and the voice emphasis on lines that the rapper perceives to be memorable is distinct. Usually, a more animated voice indicates to listeners that they should pay closer attention to a particular part of a rap during a verse. In urban science classrooms, it is useful for the teacher to engage in a similarly complex use of inflection and volume during a lesson.

APPROACHING GENUINE CLASSROOM COMMUNICATION FOR URBAN YOUTH

Unfortunately, in many urban schools that predominantly serve students of color, the types of instruction described above; that foster argumentation, and consider artifacts of hip-hop like the battle and cypher are rarely implemented. In these schools, the general perception of student participation, and the type of practices that a ―good student‖ should be enacting are skewed (Emdin, 2009). Teachers of hip-hop youth perceive students to be actively involved, constructively participating, and behaving appropriately when they enact behaviors that under normal circumstances in students‘ out-of-school worlds would indicate a lack of interest. For example, ethnographic studies in urban classrooms show that in traditional urban science classes, students are commended for blindly following instructions outlined by the teacher, sitting quietly, and getting prescribed results to lab assignments (Emdin, 2010). Conversely, students who do not talk much in the class, and who spend the entire class period copying notes are generally considered by teachers to be well behaved while those who indicate a need or desire to engage (by using a lot of gestures and speaking loudly) are considered to be a distraction and reprimanded (Emdin, 2009).

I argue that viewing actions that normally indicate disinterest outside of the classroom as active involvement or

communication in the classroom creates a terrible confusion for both the student and the teacher, and limits the students' ability to be fully involved in science. Students begin to perceive that the expected behavior in the classroom is to not question, to be quiet, and to be passive. Consequently, students and teachers rarely get to the point where fluid communication and argumentation becomes a classroom norm. With the absence of communication and argumentation, the achievement gaps in science persist because students never get to the point where the subject matter becomes important enough to engage in with the same passion and excitement they express in hip-hop.

For students in urban science classrooms, who are for the most part largely influenced by, or immersed in hip-hop, the separation between their out-of-school and in-school worlds persists because educators fail to recognize the connections between students' cultural understandings and science (Barton, 2001). When the relationship between students and the teacher mirrors that of power wielders and the powerless, and when teachers position students' experience-based understandings as outside of school science, students cannot be expected to have an interest in the discipline. Furthermore, when the rule by force ideology that dominates urban science teaching, and the current ethos of ―ding science work" instead of discussing and engaging in science continues to dominate urban teaching and learning, urban youth of color who are immersed in hip-hop are at a disadvantage.

DISCUSSION AND CONCLUSIONS

For many educators, approaches to science teaching and learning that utilize hip-hop culture may be perceived as unconventional, inappropriate, and even unrealistic. However, they are the key to connecting youth who have been marginalized from academic success to school. If science education is to satisfy the passions and interests of the hip-hop generation, educators must be willing to withstand the pressure to maintain approaches to instruction that historically have not met the needs of urban youth, and explore new hip-hop based pedagogies that are more reflective of student realities.

For urban youth of color who are deeply immersed in hip-hop, deep study of their culture, with the goal of identifying tools within this culture that may support transformative pedagogical practices is necessary for education reform. This requires moving into new arenas in both urban and hip-hop based education, accepting yet moving beyond rap based pedagogy, and moving into disciplines like science where the instruction is stoic while the discipline itself is deeply aligned to hip-hop.

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