

Virtual Professional Learning Network: Exploring an Educational Twitter Chat as Professional Development

Edmund S. Adjapong

Seton Hall University

Christopher Emdin

Teachers College, Columbia University

Ian Levy

Manhattan College

“Ayo! A lot of these Twitter chats on education and [#HipHopEd](#) go harder than my school’s Professional Development.” - HipHopEd Educational Twitter Chat Participant

Introduction

Considering the advancement of digital technology over the past decade, and its impact on social media platforms such as Twitter, Facebook, and Instagram, the utility of social media among individuals from all over the world has increased exponentially, and these platforms have become integral to creating and maintaining wide-reaching virtual communities. With an electronic device as small and easily accessible as a cellphone, individuals can share information in the form of text, photos, videos, and live streaming instantaneously with their social networks. Over the past few years, these virtual communities have grown to include professional educational learning networks.

In traditional educational settings such as schools, teachers are required to attend mandated professional development sessions that have a goal of “engaging teachers in practical tasks and providing opportunities to observe, assess and reflect on the new practices” (Darling-Hammond & McLaughlin, 1995). Studies suggest that effective professional development for educators should “concentrate on instruction and student outcomes in teachers’ specific schools; provide opportunities for collegial inquiry, help, and feedback; and connect teachers to external expertise while also respecting teachers’ discretion and creativity” (Newmann, King & Youngs, 2000). While we recognize the necessity and importance of effective professional development for teachers, research suggests that professional development for teachers historically has been woefully inadequate for meeting its intended goals and teachers’ specific professional learning needs (Borko, 2004). Sykes (1996) identified conventional professional development as “the most serious and unsolved problem in policy and practice in American education today” due to the fact that most professional development do not cater to teachers’

individual needs (p. 465). The reality is school districts and the federal government invest millions of dollars each year in support of professional development that is fragmented, that does not take into account how teachers learn, and that does not cater to the individual professional needs of teachers (Ball & Cohen, 1999; Borko, 2004). In response, we suggest an approach to professional development that considers the challenges with the existing approaches while providing a mechanism for connecting teachers around beliefs, ideologies, and philosophies that directly impact their practice.

Over the past two decades, a considerable amount of literature has emerged on the “best practices” in professional development and teacher learning, but little research has been conducted on the effects of professional development on improving teacher, and in turn, student outcomes (Garet et al. 2001; Guskey & Yoon, 2009). Further, when discussing the professional learning of teachers, it is essential to recognize that it is a complex process that involves both cognitive and emotional participation of teachers. As Avalos (2011) demonstrates, professional learning for educators requires the capacity and willingness to examine where they stand in terms of convictions and beliefs and the perusal and enactment of appropriate alternatives for improvement or change. When we discuss the challenges of conventional professional development for educators, we recognize that the culture and experiences of educators strongly influence the attitudes, values, and behaviors that they bring to the profession (Gay, 2002; Putnam, & Borko, 2000). In understanding that teachers come from various cultural backgrounds and experiences, we argue that professional development should also cater to the specific interests, needs, cultural and experiential backgrounds of educators.

As outlined by Borko (2004), conventional professional development is composed of four key elements (see Figure 1) that includes the professional development program, the teachers (who are the learners), the facilitator (who guides teachers as they construct new knowledge and practices), and the context in which professional development occurs. The relationship between these four key elements are essential in understanding the effectiveness of professional development, though most of the literature on professional development focuses solely on the relationship between teachers (as learners) and professional development programs. Little research has been conducted that interrogates the relationship between the context, conventional professional development programs and the effects of alternative forms of professional development on teachers (as learners) (Garet et al. 2001).

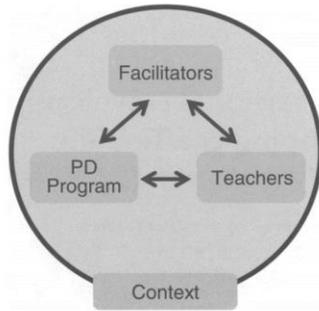


Figure 1: *Elements of a professional development system (Borko, 2004).*

The field of education is ever changing as a result of new policy and new research-based approaches to teaching and learning. These constant shifts in the field often force schools and school districts to constantly update their professional learning goals for teachers (Elmore, 2004). Due to constant shifts in the field and the varying needs of teachers, not every form of professional development is relevant to all teachers. Therefore, there is a need to study and identify alternative approaches to professional development to supplement conventional professional learning that teachers receive, with the goal of meeting their varying needs of teachers and, in turn, the educational needs of their student populations.

In this paper, we explore educators' use of technology to supplement traditional professional development that they may receive in their schools or institutions. Many educators in the 21st century use various forms of technology as part of their daily teaching practices and as part of their personal lives. In this paper, we set to explore the impact of a weekly education-focused Twitter chat on educators' professional learning. We also set to identify a weekly educational Twitter chat as a Virtual Professional Learning Network (VPLN). We identify a VPLN as a uniquely personalized space where participants can engage in dialogue with a network of individuals from around the world via social media platforms such as Twitter (and other social media platforms) to support one another's continuous professional learning. Garrison (2007) describes an online PLN as a synchronous or asynchronous online platform for individuals to collaboratively engage in critical thinking and discussions around specific issues (Trinkle, 2009).

VPLNs consist of global learning networks that enable participants to share diverse, global perspectives on teaching strategies and educational issues. In this article, we identify a Twitter chat that focuses on educational topics as a VPLN because through the use of technology (the medium of Twitter) educators from across the globe are able to self-select, interact and engage, and participate with the virtual professional network to support their professional learning. Considering the shortcomings of traditional

professional development, through educators' participation in VPLNs they are provided opportunities to meet their specific professional learning needs (Krutka, Carpenter & Trust, 2017). We argue that VPLNs provide educators with the opportunity to use social media platforms as a tool to interact with colleagues and experts who share similar interest and concerns while transcending spatial boundaries using an electronic device as simple as a cell phone (Gee, 2004). Further, weekly educational Twitter chats normally occur during the same scheduled time each week allowing educators to plan in advance to participate, given their busy schedules or even plan to participate in multiple VPLN's that cater to their multiple specific needs (Conner, Pope & Galloway, 2009). Through virtual interactions with colleagues and experts, educators can access and share a variety of tools, including skills, habits, resources, ideas, and information that will support their daily practice (Krutka, Carpenter & Trust, 2016).

Despite research that suggests that educators working collaboratively represents best practice; the reality is that teachers in many schools work in isolation because of differing views and beliefs (DuFour, 2004). The literature on technology professional development for teachers demonstrates there is still a lack of understanding of effective practice with respect to the impact of professional learning anchored in technology has on teaching and learning (Lawless & Pellegrino, 2007). VPLNs provide educators who may find themselves working in isolation at their schools an opportunity to network, collaborate and engage with a community of like-minded individuals who can support in enhancing their professional learning. In her book, *Teaching to Transgress* bell hooks (1994) shares that engaging in a professional dialog "is one of the simplest ways we can begin as teachers, scholars, and critical thinkers to cross boundaries that may or may not be erected by race, gender, class, professional standing, and a host of other differences" (p. 130). VPLNs allow educators to cross geographical boundaries by engaging in a global network that includes participants who have varying beliefs, perspectives and experiences as it relates to education. VPLNs provide educators with the opportunity to engage in professional dialogue with participants who have similar interests, but varying cultures and lived experiences due to varying geographic locations, with the goal of "crossing social boundaries" and developing an understanding of social issues and their impact on different groups of people.

Through engaging in a VPLN that brings together participants of varying cultures and lived experiences, teachers are afforded opportunities to develop their cultural competence merely through their professional interactions with one another. With 84 percent of teachers identifying as White and the culturally diverse student population rapidly rising, a vast majority of teachers in the United States teach students who come from a culture other than their own (Feistritz, Griffin & Linnajarvi, 2011). VPLNs can support teachers in the development of their cultural competency and overtime, arm

teachers with the skills needed to successfully engage students who come from a different culture (Seeleman, Suurmond & Stronks, 2009).

In this paper, we argue a specific VPLN that focuses on issues at the intersection of Hip-Hop and education provides a safe and critical space for educators to develop cultural competencies around discussions of Hip-Hop, a culture that was birthed in the Bronx, NY by people of color who have been pushed to the margins of society. We argue that exposure to the beliefs and perspectives of others can lead to the development of cultural competencies.

Conceptual Framework

In this article, we employ a very distinct aspect of the *third space* postcolonial framework with the goal of dismantling and reimagining the established traditional conventions as it relates to professional development in educational spaces (Bhabha, 1994). In many ways, we argue that VPLNs can act as a *third space*, as Bhabha (1994) articulates, and can provide a virtual network via social media platforms for educators to be critical of traditional school systems, structures, and practices including conventional professional development. More specifically, we explore the concept of the *third space* as a framework for making sense of the possible ways in which educators can inform their educational practice and reimagine professional learning that is catered to their individual needs (Bhabha, 1994; Gutiérrez, Baquedano-López, Tejeda, et al., 1999). In this article, we argue that VPLNs, such as educational Twitter chats, can serve as a third space which Bhabha (1994) describes as an “in-between space ... that disrupts the politics of polarity and allows for the possibility of resistance towards nationalistic and ethnocentric ideas and discourse” (p. 2). Bhabha argues that hybrid spaces blur the limitations of existing boundaries and allow for the interrogation of the complexities of culture and identity (Bhabha, 1994). In essence, VPLN can act as a *third space* to deconstruct the traditional structures of schooling, such as conventional professional development, which are known not to be tailored to the specific individual needs of all educators (Sykes, 1996).

We identify the *first space* as a physical space where educators engage in instructional practice within their traditional classrooms and the *second space* as the conventional professional development program that educators receive at their institutions (see Figure 2).

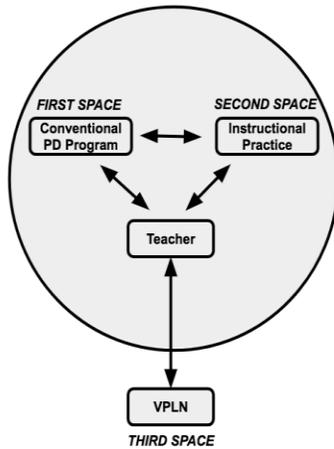


Figure 2. Visual representation of the relationships between first, second and third spaces as it relates to conventional professional development VPLNs.

Within the *first space* of the traditional classroom where educators engage in daily practice with their students, we argue that educators recognize limitations in their practice or seek opportunities to enhance their current instructional practice. This leads educators to the *second space*, conventional professional development. Within the *second space* of conventional professional development, educators may not find their professional learning needs met (Borko, 2004), which may lead educators to the *third space*. We articulate the third space as a VPLN that caters specifically to teachers' professional learning needs and provides opportunities for educators to engage in discussions, share and receive information/resources that support in enhancing teacher practice. Further, engaging in a VPLN as a third space, as Bhabha (1994) articulates, provides opportunities for educators to disrupt the politics of conventional professional development by inviting colleagues and peers to various VPLNs that cater to their specific professional learning needs and support in enhancing educational practice.

Methods

#HipHopEd Educational Twitter Chat as a Virtual Professional Learning Network

In this paper, we highlight and interrogate the impact that a specific VPLN (educational Twitter chat) has on educators who self-identify as participants of the VPLN. The #HipHopEd educational Twitter chat is a seven-year-old VPLN that meets during a scheduled time for one hour a week when participants engage in conversations and share information/resources around curated topics of Hip-Hop and education. Each week the #HipHopEd educational twitter chat is promoted to participants of the VPLN and the greater Twitter community with a visual flyer (see Figure 3) that captures the weeks' topic.

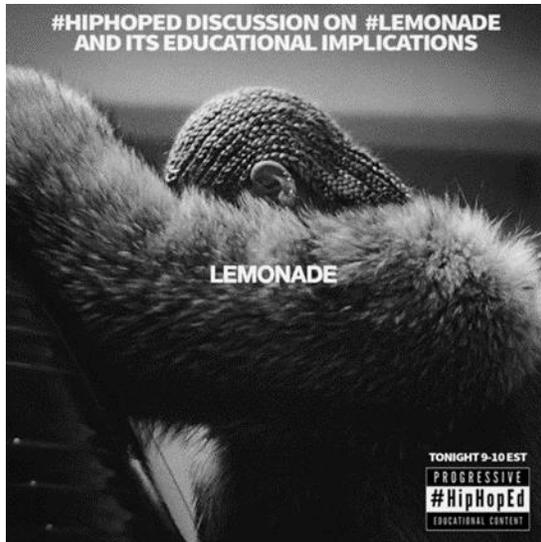


Figure 3. Example of visual flyer used to promote the #HipHopEd VPLN

Most educational twitter chats follow a format where there is an expert who moderates the discussion and poses pre-prepared questions aligned with the topic of discussion for participants to answer. We believe that this structure of a VPLN limits the interactions of the participants to mainly answer posed questions, as opposed to sharing their attitudes, beliefs, experiences, tools/resources/information with the larger network. The #HipHopEd educational Twitter chat does not have a moderator and does not follow a specific structure that forces participants to solely respond to questions. Rather, #HipHopEd educational Twitter chat provides a space where participants engage in conversations, share and receive information/resources around the topic of the chat.

The #HipHopEd educational Twitter chat functions as a virtual cypher [1] because it is structured like a hip-hop cypher where each participant's voice and perspective are equally valued. Because the #HipHopEd educational Twitter chat focuses on issues around Hip-Hop and education the structure of the educational Twitter chat is aligned to Hip-Hop culture and sensibilities. The #HipHopEd educational twitter chat is similar to a gathering of MCs - where the energy generated by one individual is then picked up by another with a goal of keeping the energy going. The #HipHopEd educational Twitter is a VPLN for educators, but welcomes all stakeholders of education includes students, parents, academics, professionals, practitioners and hip-hop artists to participate in the weekly chats. The creators of the #HipHopEd educational Twitter chat intentionally strive to create a space where academic credentials are not necessary to be a part of the learning network. Therefore, a participant's value to the network is based solely on their participation.

Participants

Participants of this study self-identified as active participants of the #HipHopEd educational Twitter chat. Further, the participants in our study represent a diverse group of individuals who are all stakeholders of education including, K-12 teachers, K-12 administrators, parents, graduate students, professors, school counselors, and journalists. It's important to highlight that not all of the 31 participants of this study are professionals in education, but have an interest in education, more specifically the intersection of Hip-Hop and education. Through participating in #HipHopEd educational chat, teachers who historically work within their schools in isolation are provided with opportunities to share professional knowledge via social media platforms to support their professional learning beyond conventional professional development (DuFour, 2004).

Data Collection

A total of 31 participants of the #HipHopEd VPLN completed an anonymous questionnaire, which was the primary data source for this study. The questionnaire was composed of Likert response and short response questions. The questionnaire was shared during a #HipHopEd educational Twitter chat and educators were encouraged to participate in completing the anonymous questionnaire.

Data Analysis

Qualitative coding techniques, including member checking and coding for recurring themes were used to analyze the data generated from this study (Guba & Lincoln 1989; Creswell, 2013). The data from the short response items from the questionnaire were entered into a Word document for word-by-word and initial coding for categories. Then, the data that was selected for to be categorized was entered into Nvivo to organize and then combined into reoccurring themes using nodes. The three main themes that emerged from data analysis are (1) Sense of Belonging within Professional Learning Network; (2) Impact on Educational Practice; and (3) Development of Cultural Competence.

Results and Findings

Table 1. *N and Percentages (in Parentheses) of Participant Responses for Likert Items from Questionnaire.*

Item	Strongly Agree (%)	Agree (%)	No Opinion (%)	Disagree (%)	Strongly Disagree (%)
1) I have created professional relationships with other #HipHopEd chat participants	9 (29)	11 (35.5)	6 (19.4)	5 (16.1)	0 (0)

2) Participating in weekly #HipHopEd chats provides a form of professional development that I do not receive at my school	19 (61.3)	8 (25.8)	3 (9.7)	1 (3.2)	0 (0)
3) Participating in weekly #HipHopEd chats has encouraged me to be a more engaging educator in my classroom/education profession	14 (45.2)	15 (48.8)	1 (3.2)	1 (3.2)	0 (0)
4) The weekly #HipHopEd chat provided a space for me to reflect on ways to become a more engaging educator	16 (51.6)	12 (38.7)	1 (3.2)	2 (6.5)	0 (0)
5) The weekly #HipHopEd chat provided a space for me to engage in discussions about education with like minded educators who have an interest in Hip Hop culture	20 (64.5)	10 (32.3)	1 (3.2)	0 (0)	0 (0)
6) The weekly #HipHopEd chat provides a space for me to discuss challenging topics that impact the lives of urban youth (Hip Hop generation), which I would not otherwise have an opportunity to do so	6 (19.4)	18 (58.1)	4 (12.9)	3 (9.7)	0 (0)

The findings of this study are organized by recurring themes that emerged during the data analysis process. To elaborate on recurring themes, we provide exemplary moments from the participants' open responses to short answer survey items, suggestive of their experiences as participants of the #HipHopEd educational Twitter chat. Participants responded to two open-ended survey items: (1) Explain why you participate in the weekly

HipHopEd Chats, and (2) Would you recommend your peers, colleagues and fellow educators to participate in the weekly #HipHopEd Chats? Please explain why. The process of coding responses for each item lead to the emergence of recurring themes. Three emerging themes are reported consisting of responses from both open-ended and Likert scale items include (1) a sense of belonging within the VPLN; (2) an acknowledged impact on educational practices; and (3) a development of cultural competence.

A Sense of Belonging within Virtual Professional Learning Network

Through engaging in the #HipHopEd educational Twitter chat, consists of hundreds of participants who are all exchanging knowledge, participants were able to develop a sense of community within the larger network. Various statements from participants spoke to their involvement in the chat that highlighted their sense of belonging to an intimate community within the larger VPLN. Hagerty et al. (1992) defines sense of belonging “as the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment” (p. 172). In reference to the #HipHopEd educational chat, one participant suggested, *“the community within #HipHopEd is vast and the knowledge pool is world-class. As the community continues to grow the benefits and knowledge will follow.”* This individual describes a community within the #HipHopEd VPLN and found value in participating in the weekly #HipHopEd educational chats. Further, they suggest that the network continues to grow, subsequently allowing for a consistent increase in “world-class” knowledge that in turn will support their professional learning. Participants of the #HipHopEd VPLN recognize that there are benefits, which include an exchange of resources and knowledge, associated with belonging to a growing network of individuals who share similar interests.

It also appears that the #HipHopEd educational twitter chat functions as a space where participants can cultivate intimate bonds with others, as highlighted by the following quote, *“I believe I hit a pinnacle where I can say I’m a part of the family. Whether I take part in the chat, or I miss it, I’ll still read the tweets over at a later time.”* This statement showcases that participants feel a sense of belonging when engaging in the #HipHopEd educational chat; where they see themselves as an integral part of the VPLN that parallels a connection that one may have with family. Because participants have a sense of belonging to the #HipHopEd educational chat, they are inclined to read the tweets/comments at a later time even if they miss the live chat because they as if it is their obligation as part of the intimate community. Further, the resources, and voices, within the VPLN are valued to the degree that participants do not want to miss out on the knowledge shared. Additionally, 64.5% of participants agree with the statement, *“I have created professional relationships with other #HipHopEd chat participants”* demonstrating a sense of belonging to the VPLN as positive professional relationships can form from weekly participation (table 1).

These statements by #HipHopEd chat participants support the prior claims that VPLNs can provide educators with the opportunity to use social media platforms as a mechanism to collaborate with like-minded colleagues from the comfort of their own home (Gee, 2004). Comments from members of the #HipHopEd educational Twitter chat additionally showcase that not only is the educational chat accessible from anywhere in the world, but resources and tools discussed on the chat are archived and can be accessed at a later date in the event a chat was missed. This adds justification for use of this innovative VPLN as a form of professional development that can fit into participants busy schedules, because it can be accessed on the go, from home, or at a later date (Conner, Pope & Galloway, 2009).

When participants were asked if they would invite others to the #HipHopEd VPLN, one member responded,

“Yes, I would [invite others to the #HipHopEd VPLN] because it is a forum that will allow one to learn and grow as an educator and help break people out of their comfort zone and help them better prepare their students for the world that awaits them!”

Here we find that the VPLN operates as an online space where educators can push their colleagues to innovate their own practices. The value members extract from the space appears to encourage them to expose others to the same transformative educational practice. This explanation supports the use of the VPLN as a *third space* where educators have opportunities to challenge the politics of conventional professional development by inviting colleagues and peers to various VPLNs that support in enhancing their professional learning (Bhabha, 1994).

VPLN's Impact on Instructional Practice

Through engaging in the #HipHopEd educational Twitter chat, participants suggest that their instructional practice was impacted, specifically by the tools, resources, information and skills that were obtained through participating in the weekly chat. As per the data reported from the questionnaire, 94% of participants agree with the statement, “participating in weekly HipHopEd chats has encouraged me to be a more engaging educator in my classroom/education profession” (table 1).

An overwhelming percentage of participants of this study believe that participating in the #HipHopEd educational chat impacted their practice by specifically encouraging them to be more engaging educators, possibly by gaining tools that supported the teaching to the specific needs of their students. For example, one participant suggested, “*I use hip-hop as learning tool and the weekly chats always help me to check myself, check my sources, and innovate from lesson plan to lesson plan.*” In this response, the participant discusses how engaging in the #HipHopEd educational Twitter chat directly impacts their daily instructional

practice. This shows that participants are able to use the information/resources gained from the weekly educational Twitter chat to influence their teaching. When the participant states, *the weekly chats always help me to check myself, check my sources*, this suggests that participants use the VPLN as a mechanism to reflect on improving their daily practice to ensure that they are utilizing Hip-Hop in their educational space effectively and in an authentic fashion.

In an additional response, a participant stated, *"I use it mostly to reflect, whether on current or past teaching opportunities. It's a good archive to tap to see what others are thinking and what they like, what they follow."* Here it is suggested that #HipHopEd educational chat participants reflect on their instructional practice and have opportunities to learn from like-minded educators of a VPLN who can positively influence one another's practice as 90.3% of participants agree that the weekly #HipHopEd chat provided a space for them to reflect on ways to become a more engaging educator (table 1). Responses also indicated that the chat *"provides a fresh perspective, great classroom ideas & peer support,"* and is *"a resource and a way of becoming familiar with some of the ideas around Hip-Hop education."* One of the proposed outcomes of an educational Twitter chat as a VPLN, is that as educators utilize technology to interact with colleagues and experts in their field, they are exposed to a variety of tools, skills, habits, resources, and ideas that ultimately will support in transforming their educational practice (Krutka, Carpenter & Trust, 2016).

A final exemplary response under this theme was that the VPLN *"helped me to talk explicitly about social issues in class in a way that is meaningful to students."* This educator suggests that through participating in the #HipHopEd education chat, they were offered support in how to effectively address social justice issues in the classroom in a way that was meaningful to students. As a result of participation in the #HipHopEd Twitter chat, participants felt more comfortable engaging in direct, and explicit, conversations around social justice concerns. Therefore, beyond the provision of tangible tools to use in classroom spaces, educators also reported gathering competence in addressing social justice concerns from the #HipHopEd Twitter chat.

Development of Cultural Competence

The development of participants' cultural competence was also one of the emergent themes from qualitative data analysis, detailing participants' ability to become more aware of Hip-Hop culture. We argue that with a better understanding of Hip-Hop culture participants, will better understand how to teach and engage young people who identify as a part of the Hip-Hop generation. For example, one participant stated that attending the weekly #HipHopEd educational Twitter chat enabled them to, *"become more literate in a culture that is not one [that they] grew up with."* Statistics show that an overwhelming majority of teachers in the United States identify as White while the student population across the country becoming increasingly culturally diverse. Many scholars argue that it

is the teacher's responsibility to position themselves in a space where they can learn and immerse themselves in the cultures of their students (Adjapong & Emdin, 2015; Adjapong, 2017).

The results of this study show that through participating in the #HipHopEd educational Twitter chat, outsiders of Hip-Hop culture are provided opportunities to begin to develop their cultural competence as it relates to Hip-Hop culture. Similarly, another participant shared, *"the #HipHopEd chat specifically has enabled me to connect with those students who relate to and/or enjoy hip-hop."* A third participant suggested that *"the weekly chats allow me to engage/relate Hip-Hop culture to social and educational areas that I didn't think was possible."* Overall, we notice that through engaging in the weekly #HipHopEd educational Twitter chat led to participants developing their cultural competence around Hip-Hop culture, which could ultimately led to teachers developing better relationships with students and knowledge of a culture that may be different than theirs (Adjapong, 2017). These illuminated pathways to connect with their students in ways that they *"didn't think was possible."*

As previously posited, the HipHopEd Twitter Chat focuses on issues at the intersection of Hip-Hop and education and provides a safe and critical space for educators to develop cultural competencies while engaging in discussions and sharing resources / information that relates to Hip-Hop and education. Salient findings in this emergent theme suggest that through participation in this VPLN, educators felt able to engage youth who identified with cultures other than their own.

Conclusion

We identify the #HipHopEd educational Twitter chat as a VPLN in the form of supplemental professional development that caters to the specific needs of a group of educators and community members. We do not believe that VPLNs replace conventional professional development because conventional professional development is aligned to individual school goals. We argue that VPLNs can supplement and add to the specific professional learning needs of educators. By identifying the #HipHopEd educational Twitter chat as a VPLN, we are highlighting the importance of a global network where participants from around the world can share not only resources / information, but also their cultural perspectives based on their construction of knowledge of the world. Future, teachers who are a part of the VPLN have the opportunity to connect to a more intimate community within the VPLN and develop meaningful professional relationships which will encourage collaboration and further professional learning.

Specifically, through engaging in the #HipHopEd VPLN, participants were able to increase their cultural competence as it relates to Hip-Hop culture, which in turn will have a positive effect on instructional practice, how educators perceive students' culture

allowing for positive and meaningful relationships between students and educators. While we highlight the impact of the #HipHopEd educational Twitter chat as a VPLN, and the importance of VPLNs writ large, we acknowledge that more research must be conducted to elicit the effectiveness of VPLNs on teacher practice and attitudes as it relates to conventional professional development.

Limitations

This study was conducted using a small sample size of the #HipHopEd Virtual Professional Learning Network (VPLN), which represents a microcosm of the community. In future studies, we wish to increase the number of participants and focus on the process of professional learning through the VPLN. We also recognize that Twitter itself may pose a limitation as a virtual space, as participants may not gain enough professional support during the virtual weekly hour-long chats and they are not likely engage with their VPLN peers physically within schools. Similar to professional learning in traditional schools, there often is an incentive for teachers to engage in professional learning. Therefore, teachers must be highly motivated to effectively engage in any VPLN.

Edmund S. Adjapong is Assistant Professor of Educational Studies at Seton Hall University.

Christopher Emdin is Associate Professor of Science Education at Teachers College, Columbia University.

Ian Levy is Assistant Professor, Graduate Counseling, Leadership & Education at Manhattan College.

Notes

[1] Cypher - an informal gathering of rappers, beatboxers, and/or break-dancers in a circle, where each participants' voice is equally valued

References

- Adjapong, E. S., & Emdin, C. (2015). Rethinking Pedagogy in Urban Spaces: Implementing Hip-Hop Pedagogy in the Urban Science Classroom. *Journal of Urban Learning, Teaching, and Research*, 11, 66-77.
- Adjapong, E. S. (2017). Bridging Theory and Practice in the Urban Science Classroom: A Framework for Hip-Hop Pedagogy in STEM. *Critical Education*, 8(15).
- Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and teacher education*, 27(1), 10-20.
- Bhabha, H. K. (1994). *Remembering Fanon: Self, psyche and the colonial condition* (pp. pp-vii).

- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3-15. Retrieved from <http://www.jstor.org/stable/3699979>
- Conner, J., Pope, D., & Galloway, M. (2009). Success with less stress. *Educational Leadership*, 67(4), 54-58.
- Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi delta kappan*, 76(8), 597.
- DuFour, R. (2004). What is a "professional learning community"? *Educational leadership*, 61(8), 6-11.
- Elmore, R. F. (2004). *School reform from the inside out: Policy, practice, and performance*. Harvard Education Press. Cambridge, MA.
- Feistritz, C. E., Griffin, S., & Linnajarvi, A. (2011). *Profile of teachers in the US, 2011* (pp. 09-14). Washington, DC: National Center for Education Information.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American educational research journal*, 38(4), 915-945.
- Garrison, D. R. (2007). Online community of inquiry review: Social, cognitive, and teaching presence issues. *Journal of Asynchronous Learning Networks*, 11(1), 61-72.
- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of teacher education*, 53(2), 106-116.
- Gee, J. P. (2004). *An introduction to discourse analysis: Theory and method*. Routledge.
- Guskey, T. R., & Yoon, K. S. (2009). What works in professional development?. *Phi delta kappan*, 90(7), 495-500.
- Gutiérrez, K. D., Baquedano-López, P., & Tejada, C. (1999). Rethinking diversity: Hybridity and hybrid language practices in the third space. *Mind, culture, and activity*, 6(4), 286-303.
- Hagerty, B. M., Lynch-Sauer, J., Patusky, K. L., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of psychiatric nursing*, 6(3), 172-177.
- Hooks, B. (1994). *Outlaw culture: Resisting representations*. Routledge.
- Krutka, D. G., Carpenter, J. P., & Trust, T. (2016). Elements of engagement: A model of teacher interactions via professional learning networks. *Journal of Digital Learning in Teacher Education*, 32(4), 150-158.

- Krutka, D. G., & Carpenter, J. P. (2017). Enriching professional learning networks: A framework for identification, reflection, and intention. *TechTrends*, 61(3), 246-252.
- Lawless, K. A., & Pellegrino, J. W. (2007). Professional development in integrating technology into teaching and learning: Knowns, unknowns, and ways to pursue better questions and answers. *Review of educational research*, 77(4), 575-614.
- National Education Association. (2008). Promoting Educators' Cultural Competence To Better Serve Culturally Diverse Students. Retrieved April 27, 2018, from the National Education Association Web site:
http://www.nea.org/assets/docs/PB13_CulturalCompetence08.pdf
- Newmann, F. M., King, M. B., & Youngs, P. (2000). Professional development that addresses school capacity: Lessons from urban elementary schools. *American journal of education*, 108(4), 259-299.
- Seeleman, C., Suurmond, J., & Stronks, K. (2009). Cultural competence: a conceptual framework for teaching and learning. *Medical education*, 43(3), 229-237.
- Sykes, G. (1996). Reform of and as professional development. *Phi Delta Kappan*, 77, 465-467.
- Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning?. *Educational researcher*, 29(1), 4-15.