



Emerging Pedagogies in Changing Contexts: Pedagogies in Networked Knowledge Society

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Abstract

The notion of pedagogies is a multi-dimensional and emergent construct built within the interplay(s) of pedagogical components (i.e., technology, pedagogy, and content) and changing pedagogical contexts of society, economy, education, and science and technology, to name a few. But the traditional/existing pedagogical frameworks fail to see the interplay between the components and the changing contexts of pedagogies. The traditional/existing pedagogies seem to be static and one-dimensional that either they exclusively focus in the components or in the contexts only. In this paper, I call for rethinking the traditional/existing pedagogies and framing them as “emerging pedagogies” so as to capture the emergent and multi-dimensional nature of pedagogy within the currently evolving pedagogical contexts of networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies. Highlighting the strengths and weaknesses of two major pedagogical frameworks – i.e. “technological pedagogical content knowledge” (TPCK) and multicultural education (MCE), I offer a theoretical discussion for emerging pedagogies as a concept and as a practice. A recommendation is made for future research and theories pertaining to the emerging pedagogies.

Keywords: Emerging pedagogies, networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies

Introduction

Generally, the notion of pedagogy[†], being used synonymously with the term “teaching,” is understood in a one-dimensional way, as the “methods” of instruction dealing with how to teach. But the one-dimensional understanding of pedagogy does not fully serve

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† The notion of pedagogy has several dimensions including teaching, learning, curriculum, and assessment. Here I will use teaching as the focal point while anchoring the other remaining dimensions as necessary.

its meaning as pedagogy entails multiple dimensions including the both pedagogical components and contexts. Today, pedagogical components involve how teachers develop, prepare, and practice their professional competencies in teaching and in classrooms (Munby, Russell, & Martin, 2001; Shulman, 1986). The professional competencies encompass multiple pedagogical components including content knowledge, pedagogical knowledge, and more recently, technological knowledge, and the knowledge generated within the intersections of these components (Mishra & Koehler, 2006; Shulman, 1987). Furthermore, pedagogy is not only multi-dimensional, but also complexly evolving phenomenon based on the changing pedagogical contexts of society, economy, education, and science and technology, to name a few (National Education Technology Plan [NETP], 2010). Thus, pedagogy becomes a dynamic and emergent phenomenon – therefore, I call it emerging pedagogies – demanding continuously renewed professional competencies for teachers within the changing pedagogical contexts (e.g., society, economy, and technology). Developing and implementing emerging pedagogies in practice require a comprehensive understanding of both pedagogical components and contexts, that is to say the interplay of technology, pedagogy, content, and society.

The interplay is evident and inevitable, especially with the rise of “network society” (Castells, 1996) and the intensive use of information and communications technologies in the society and schools. The network society, penetrated by social media technologies (e.g. Web 2.0, social media, and cloud computing) and information processing, is quickly becoming a knowledge-based society, and also increasingly embracing knowledge economy (Anderson, 2008; Castells, 1996; van Dijk, 2006). The networked society is “compressing” (Carnoy & Castells, 2001) global diversity into one space in unprecedented ways. For instance, people coming from all over the world with diverse socioeconomic, cultural, and political backgrounds are involved in digitally mediated economic activities, collaborations, and interactions by transcending time and space boundaries. This compression of global diversity also begs the question of equity, fairness, and freedom pertaining to the existence and participation of all individuals and communities whether diversity-oriented democratic practices exist in a globally networked society. Furthermore, the knowledge-based networked society, now on I call it networked knowledge society (NKS), and knowledge economy also demand new types of literacies, the digital literacies, in order to participate and interact in socioeconomic activities.

But in the past, some of the major pedagogical frameworks – e.g., technological pedagogical content knowledge (Mishra & Koehler, 2006) and multicultural education (Banks, 1993; Bennett, 2001; Gay, 2000) – have failed to approach and discuss the interplay of technology, pedagogy, content, and society, in one way or the other. In this context, I argue that pedagogy should be framed as “emerging pedagogies” so as to capture the emergent and multi-dimensional nature of pedagogy, evolving pedagogical

contexts (i.e., networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies), and the interplay of these pedagogical components and contexts. The emerging pedagogies interlink technology, pedagogy, content, and society as the integral components of pedagogies. In this paper, I argue that existing pedagogical frameworks including the “technological pedagogical content knowledge” (TPCK) and multicultural education (MCE) are problematic as they fail to address the currently evolving pedagogical contexts. I further argue that rethinking on the existing pedagogical frameworks is necessary within the evolving pedagogical contexts. Then, I move on to exploring and examining the evolving pedagogical contexts including the networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies. I explore the evolving pedagogical contexts aiming at deriving implications for emerging pedagogies. Finally, drawing on the implications, I discuss emerging pedagogies as a concept and as a practice by shifting my discussion from rethinking pedagogies to emerging pedagogies.

Problems of Existing Pedagogical Frameworks

Currently, in order to address the pervasive presence and integration of technology in schools and classrooms and the growing student diversity, there exist two major pedagogical frameworks that are widely implemented in teacher education programs, and to some extent in teacher professional development: technological pedagogical content knowledge (Mishra & Koehler, 2006) and multicultural education (Banks, 1993; Bennett, 2001; Gay, 2000). Both of these frameworks play vital and foundational roles in developing, preparing, and practicing teachers’ professional competencies and pedagogies.

Technological pedagogical content knowledge is built on Shulman’s (1987) historical construct of pedagogical content knowledge (PCK) by integrating technology component to it. TPCK establishes “the connections, interactions, affordances, and constraints between and among content, pedagogy, and technology” (Mishra & Koehler, 2006, p. 1025). Furthermore, TPCK provides an essential conceptual and “theoretical ground” to develop and design “pedagogical strategies and an analytic lens to study changes in educators’ knowledge about successful teaching with technology” (p. 1046). Given the pervasiveness of technology in schools and everyday lives and in the era of teaching new generation of learners – often termed as “digital natives” (Prensky, 2001), “net generation youth” (Tapscott, 2008), and “i-kids” (Prensky, 2010) – TPCK framework echoes with the idea that teachers can no longer separate or dismiss technology from their pedagogical practices. However, TPCK, despite its significance and prominence in teaching and pedagogy, is problematic as it fails to address the major contextual pedagogical factor (i.e., the currently evolving networked knowledge society) and, largely and unfortunately, disassociate pedagogy from society, culture, and economy.

From the early twentieth century and on, the ultimate function and goal of pedagogy is to cater education ruminating on the contemporary societal needs, demands, and changes (Dewey, 1959; Spencer, 2001). Understandably, we cannot keep adding components one after another (e.g., society, culture, and economy) on Shulman's PCK, but at the same time as TPCK does, we cannot completely ignore the underlying structures of pedagogy – the social, cultural, and economic structures that education, schools, and pedagogy are intricately intertwined with (Dewey, 1959; Freire, 2000; NETP, 2010). Pedagogy, especially with the integration of technology, is all about how teachers design learning environments that integrally include communities and how they manifest their professional competencies in these environments to engage students in learning (Bransford, Brown, & Cocking, 2000; NETP, 2010). Bransford, Brown, and Cocking (2000) state that learning environments should be learner centered, knowledge centered, assessment centered, and community centered. But TPCK barely mentions the underlying structures of pedagogy (i.e., social, cultural, and economic structures) throughout the discussions of technology, pedagogy, and content.

Next, multicultural education (MCE) began with the Civil Rights movement of the 1960s by converging political interests of the Black Power Movement and intergroup education (also later known as *intercultural education*) movement of the 1940s and 1950s (Banks, 1993; Gibson, 1976). Since then MCE has vastly expanded its scope toward creating democratic and inclusive education for all by examining the curriculum content, the knowledge construction processes, prevailing prejudices, equity in education, and power dynamics within institutional (e.g., schools) and social structures (Banks, 1993). Today, MCE investigates various socio-cultural aspects of pedagogy and advocates for educational equity and social justice for all students, who come from diverse socioeconomic and cultural backgrounds including race and ethnicity, gender, class, language, religion, age, ability, and sexual orientation (Adams, Blumenfeld, Casteneda, Hackman, Peters, & Zuniga, 2010; Nieto & Bode, 2012; Sleeter & Grant, 1987). Given the increasing diversity in the United States, MCE has gained its prominence in teacher education programs and pedagogies helping teachers to build “multicultural competence” (Bennett, 2001) and develop “culturally responsive” pedagogies (Gay, 2000).

MCE is essential for developing, preparing, and practicing teachers' professional competencies and pedagogies for a diverse society. Indeed, MCE successfully establishes conceptual and theoretical connections between pedagogy and socio-cultural diversity by recognizing the importance of students' cultural knowledge, the “funds of knowledge” (Moll, Amanti, Neff, & Gonzalez, 1992), in classroom learning, while counter-narrating the monolithic and monolingual Eurocentric knowledge. MCE also promotes “culturally responsive” teaching and learning (Gay, 2000) through “social constructivist learning (Brooks & Brooks, 1993; Bruner, 1986; Vygotsky, 1978) and critical pedagogies (Freire, 2000; Giroux, 1985; Kincheloe & McLaren, 2007), in which

students construct meaning of realities and critique the realities situating in their respective socio-historical contexts. But MCE has also problem mediating the funds of knowledge and constructing socio-historical meaning of realities for students because MCE tends to deal with only traditionally existing socio-cultural, economic, and political problems of education. MCE needs to extend its scope toward exploring and challenging the currently emerging pedagogical contexts of networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies in order to advance the students' funds of knowledge and knowledge construction processes.

In sum, despite the fact that TPCK and MCE providing pedagogical foundations for teachers dealing with pedagogical components and contexts including content, pedagogy, technology, and society, they also normally fall short to see the interplay between the pedagogical components and contexts. TPCK and MCE both suffer from a basic problem that these two pedagogical frameworks are mainly focused in "fixing" the traditionally existing socio-cultural and professional problems, but they show little concern about currently evolving pedagogical contexts such as networked knowledge society and knowledge economy.

Yet the "fixing" remains largely undone and so remains the notion of pedagogy irrelevant to larger changing pedagogical contexts and for students, if pedagogy or teaching is to "mediate student learning" (Laurillard, 1993) in the contemporary society. At present, in the United States, twelve million workers are jobless with 23% "working-age" teens being unemployed and the other millions are underemployed (Bureau of Labor Statistics, 2013); the rich and poor gap is the widest in the recorded human history; people's health and life conditions are deteriorating, despite the ongoing research and innovations in various fields; the notion of democracy is becoming hazy with the rising influence of corporate monies on politics and government (Korten, 2001; Ryoo & McLaren, 2010); and the national literacy proficiency (in "document" and "quantitative" literacy) is deteriorating while the critical (e.g. "prose") literacy remains discouragingly the same with only 13% proficient and 14% still below basic (National Center for Educational Statistics, 2003). Similarly, much needed digital literacies for today's knowledge economy and diversity-oriented democracy, enmeshed in the digital divide issues (eSchool News, 2011; Gorski, 2009), is far behind the pace of technology advancement. Despite the proliferation of technology in schools and everyday lives, digital literacies barely receive any attention. Basically, education and the traditional pedagogies are quickly becoming irrelevant for learners as they offer little for employment, twenty-first century literacies (e.g., digital literacies), human wellbeing, and new type of emerging democracy.

Rethinking TPCK, MCE, and Traditional Pedagogies

With the education's historical failure described earlier, it is now an obvious reality that much of the traditionally designed and delivered pedagogies are becoming obsolete pedagogies that can only partially contribute to societal change, guarantee employment, or even meet the basic purpose of teaching/education, building literacies. Although TPCK and MCE both are foundational to pedagogy, these frameworks alone cannot meet the needs and demands of rapidly evolving society, the society that is swiftly transforming into networked knowledge society embracing new types of economy, diversity, and democracy. Since this societal transformation creates new pedagogical opportunities and challenges (Delanty, 2001; Hargreaves, 2003), now it is important to explore the notion of networked knowledge society and its constitutive components (i.e., knowledge economy, diversity-oriented democracy, and digital literacies) in order to rethink the traditional/existing pedagogies.

Rethinking is exploring new meaning of pedagogies within the contemporary pedagogical contexts (e.g., society, culture, economy, and democracy) and components (e.g., technology, pedagogy, and content). Rethinking delves into the new meaning of pedagogies and provides a foundation for teachers to develop transformative pedagogies that advance the society, economy, diversity, democracy, and literacies by responding to their necessities and aspirations. But rethinking also calls upon teachers to understand more about the evolving pedagogical contexts and have a sustained practice of exploring new meaning within the contexts. Currently, the evolving pedagogical contexts include the networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies. These contexts are generated within the interplay of pedagogical components (e.g., technology, pedagogy, and content) and the contexts (e.g., network society), especially with the greater influence of the networked knowledge society and its constitutive elements (e.g., knowledge economy).

Briefly, the networked knowledge society (NKS) embeds the knowledge economy to its core (Anderson, 2008; Powell & Snellman, 2008). And the NKS, in conjunction with knowledge economy, converges global diversity into one interactive space and time by engaging people from all around the world in an array of socioeconomic activities, communications, and collaborations. In turn, the global convergence of people and their activities bring forth several socio-cultural issues and sites, especially whether the existence and participation of diverse individuals and communities are deliberated as fair, equitable, and democratic practices. In other words, it becomes imperative to explore socio-cultural issues and sites in the globally networked society and economy whether people and their practices are democratic and diversity-oriented within their engagement, for which I call diversity-oriented democracy. Finally, NKS and knowledge economy also demand a new type of literacy, the digital literacies (e.g., Bawden, 2008), in order to participate and interact in the networked socioeconomic environments, and

also to establish diversity-oriented democratic practices in a digitally connected global society.

These evolving pedagogical contexts cannot be separated from pedagogies as I have mentioned earlier that the main goal of pedagogies is to cater education ruminating on the contemporary societal needs, demands, and changes (Dewey, 1959; Spencer, 2001). Therefore, pedagogies should embrace society – here the networked knowledge society and its constitutive elements (i.e., knowledge economy, diversity-oriented democracy, and digital literacies) – as an integral component of theirs. Below, I describe in length about these four pedagogical contexts of emerging pedagogies: networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies framing them as the integral pedagogical components of emerging pedagogies. I discuss NKS presenting it as the overarching component of the four components for the reason that the other three function as the apparatuses in the milieu of NKS.

Components of Emerging Pedagogies

First component, the notion of networked knowledge society combines the existing “network society” (e.g., Castells, 1996; van Dijk, 2006) and the “knowledge society” (Bell, 1973; UNESCO, 2005). The combination of these two societies constructs a new social space having new and more efficient structures and interactions than in the traditionally viewed society. The primary function of the new social space within the NKS is to facilitate information processing and information exchange for “creating, sharing, and discoursing knowledge” (Gurung & Chavez, 2011). In the NKS, the knowledge creating, sharing, and discoursing are enabled by “social and media networks” (van Dijk, 2006). Unlike the traditional society and its knowledge construction processes (i.e., mainly scientific and authoritative), a knowledge society promotes the both, knowledge as science and knowledge as culture (Delanty, 2001). Knowledge as science is based on the scientific rationality that knowledge comes from formal logic, reasoning, and experiment, and from only “authoritative sources.” Thus, scientific knowledge is paradigmatic (Kuhn, 1962), universal, rigid, and certain (see Ravetz, 1971). On the contrary, knowledge as culture penetrates deep into the “epistemic structure of society” (Delanty, 2001, p. 1) and underscores the importance of “all” types of knowledge that come from everyday practices and cultural traditions. From this perspective, knowledge is “a flexible, fluid, ever-expanding, and ever-shifting resource” (Hargreaves, 2003, p. 16) to be created, shared, and utilized by everyday people and professionals. Knowledge as culture can be described as local, specific, and more practical entity supporting how people live, work, think, and reflect on day-to-day basis.

Second, knowledge economy appeared in the beginning of the post-industrial era, initially utilizing theoretical knowledge in various service industries, such as financial

services and information technology related services (Bell, 1973). At present, knowledge economy is broad and rapidly expanding in its scope, especially in the advent of information communication technologies, the global economy, and the networked society. Knowledge economy is primarily based on science, technology, and the intellectual capital (Anderson, 2008; Powell & Snellman, 2004) with the idea that “knowledge as resource is a sharable and portable commodity” to maintain and create new economic structures, free of “time and location constraints” (Mioduser, Nachmias, & Forkosh-Baruch, 2008, pp. 24-25). Powell and Snellman (2004) state that

knowledge economy as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance as well as equally rapid obsolescence. The key components of a knowledge economy include a greater reliance on intellectual capabilities than on physical inputs or natural resources, combined with efforts to integrate improvements in every stage of the production process, from the R&D lab to the factory floor to the interface with customers. (p.121)

Knowledge economy reciprocates with NKS while harnessing the NKS’ major underlying infrastructures – the social, technological, and technical networks – as gateways to run its economic and financial activities and to utilize knowledge as commodity or raw materials. Concomitantly, knowledge economy also further rationalizes, economically and monetarily, the NKS to engage in creating and sharing knowledge.

Third, the notion of diversity-oriented democracy reflects today’s increasingly shrinking world and the density of diversity concentrated into socioeconomic activities and interactions in the networked knowledge society and knowledge economy. Diversity includes an array of socioeconomic, cultural, and political groups based on race and ethnicity, gender, class, language, religion, age, ability, and sexual orientation. Diversity also includes categorical groups such as people grouped by profession and common interest activities (e.g., sports, hobbies, and interests). But for the NKS, knowledge economy, and emerging pedagogies, the socioeconomic and cultural diversities are more salient than the categorical diversity. The diversity-oriented democracy is important, especially in the current contexts of NKS and knowledge economy, where, people, from all around the world, having diverse socioeconomic, cultural, and political backgrounds participate to create, share, and discourse knowledge (Gurung & Chavez, 2011). Within diversity-oriented democracy, participating individuals and communities must seek their civic engagement expressing “a variety of political opinions in any media” (Bollen & Paxton, 2000, p. 60), speaking freely for their individual and group identity, group politics, and common cause or collective interests (Clemens, 1997). In so doing, the participating individuals and communities should simultaneously examine the

presence, participation, and interaction of their own and the others' for possible imbrications of hegemonic ideologies and oppressive practices, and for pursuing equity and fairness in all types of activities and interactions within the NKS and knowledge economy.

Finally, the notion of digital literacies (Gilster, 1997; Lankshear & Knobel, 2008), often used interchangeably with the twenty-first century literacies (see New Media Consortium, 2005), include the necessary knowledge, skills, and attitudes towards using technology for meeting one's needs and purposes within the current networked knowledge society and knowledge economy. The term *digital literacy*, introduced by Gilster (1997), as "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers" (p. 1) has been expanded enormously since then. Currently, digital literacies can be understood as having the complex set of technology skills including various hardware and software knowledge and skills (Bawden, 2008). According to Bawden, digital literacies have four interrelated components as summarized below:

- a. underpinnings: basic computer and ICT literacies required as basic skills and abilities in workplace and the society;
- b. background knowledge: knowledge required about the types and nature of digital information and its resources;
- c. central competencies: basic skills and competencies to be able to read and understand information in digital and non-digital formats, knowledge assembly, evaluate information, create and communicate digital information, media literacy, etc.; and
- d. attitudes and perspectives: ability to perform independent learning and maintain moral and social literacy while engaging in the digital world.

Furthermore, digital literacies are emergent in nature demanding new sets of functional skills and critical knowledge for reading, writing, and interacting with the digital media, the web, and the web-mediated networked communities. The ever-advancing technology entails a continuous and adaptive learning of new technology skills and critical thinking. Especially, with the compression of diversity in globally networked society and knowledge economy, having a critical perspective is important within digital literacies in order to demystify hidden harmful ideologies embedded in the digital content (e.g., texts, images, videos, etc.) and interactions. Critical perspectives can be gained by grafting critical techno-social theories (Feenberg, 1991) such as critical media literacies (e.g., Kellner & Share, 2007) and critical literacies into digital literacies, which is called critical digital literacies (Watulak & Kinzer, 2012). Although it is a nascent framework, Watulak and Kinzer state that critical digital literacies have four central elements: "Understanding cultural, social, and historical contexts of technology use, including ethical and appropriate practices; critical thinking and analysis, reflective

practice, and functional skills with digital technologies” (p. 135). Thus, critical digital literacies encompass the essential technological and critical epistemic knowledge and skills for the purposeful use of contemporary technologies in creating, sharing, and discoursing knowledge that are pertinent to the NKS, knowledge economy, and emerging pedagogies.

Rethinking Pedagogies to Emerging Pedagogies

The descriptions above about the evolving contexts of networked knowledge society, knowledge economy, diversity-oriented democracy, and (critical) digital literacies shed light that rethinking of pedagogies involves dynamic, emergent, situated, and reflective practices. Dynamic and emergent, because rethinking calls for teachers to have the ability to change and adapt their pedagogies with the evolving contexts and, consequently, to have the pedagogical intention of putting change into practice. Situated and reflective because the primary goal of rethinking is to improve, if not transform, the teachers’ local (i.e., their own) pedagogies and classroom practices reflecting upon what is being done locally and what can be done to transform it within the changing contexts of pedagogies (e.g., NKS and knowledge economy) or globally.

Rethinking is intended to capture the essences or meanings of the evolving pedagogical contexts and help teachers to develop transformative teaching practices that advance the society, economy, and democracy by responding to their current needs. But in order to respond and advance the rapidly changing current society, economy, and democracy, pedagogies become non-static practices requiring new reflections on them on a regular basis. This is why the notion of pedagogies should be framed as “emerging pedagogies” that involve rethinking, transformative practices, and “routine” new reflections entailing conceptual and practical shifts in the existing pedagogies. Below, I describe the notion of emerging pedagogies at the conceptual and practical levels. At the conceptual level, I describe the underlying characteristics or structures of emerging pedagogies and at the practical level, I discuss the teaching practices within the emerging pedagogies.

Emerging Pedagogies as a Concept

An emerging pedagogy (EP) begins with a rethinking aimed at exploring new meanings of the existing/traditional pedagogies within the evolving contexts of networked knowledge society, knowledge economy, diversity-oriented democracy, and (critical) digital literacies. Through rethinking, EP instigates informed and visionary changes locating the problems within the traditional pedagogies and develops emerging pedagogies. EP is also imagined embedding plurality, fluidity, and emergence within it.

As a concept, EP embodies the six basic characteristics[‡] immersed themselves within the essences or meanings of the currently evolving pedagogical contexts (and now new pedagogical components) described above, that :

- EP involves rethinking of pedagogies within the evolving pedagogical contexts;
- EP integrates “high-level” use of technology with pedagogies;
- EP is a transformative pedagogical praxis;
- EP practices intersectionality;
- EP encourages continuous learning and collaboration; and
- EP embraces and fosters change.

First, *EP involves rethinking of pedagogies within the evolving pedagogical contexts*: EP explores and examines the traditional/existing pedagogies looking into their meanings within the contexts of networked knowledge society, knowledge economy, diversity-oriented democracy, and critical digital literacies. EP re-imagines teachers and students within NKS not only as knowledge consumers and knowledge workers, as many theories popularly claim (e.g., Castells, 1996; Delanty, 2001), but also knowledge creators. For teachers and students, NKS provides digital spaces and tools to create, share, and discourse knowledge. Similarly, EP seeks to empower students for knowledge economy preparing them as “highly” qualified workers, consumers, critics, and creators of knowledge. The empowering of students involves building competencies – knowledge and skills – of the twenty first century[§] (e.g. New Media Consortium, 2005) aiming at fulfilling the so called “the ingenuity gap” (Homer-Dixon, 2000). The fulfillment of the ingenuity gap calls upon the teachers and students of this generation to understand the complexity of socioeconomic and environmental crises and resolve them responsibly and creatively. Next, EP seeks to promote diversity-oriented democracy by examining the nature, production, and dissemination of knowledge and knowledge structures in the networked knowledge society and knowledge economy. In this regard, EP should interrogate the globally connected work places, collaborative sites, and other interactive spaces for possible imbrications of hierarchical power dynamics that undermine or threaten the presence, participation, and interaction of diverse people and communities coming from varied socio-cultural backgrounds such as culture, race and ethnicity, gender, class, language, religion, age, ability, and sexual orientation. And EP also builds, fosters, and forges critical digital literacies for teachers and students in order to critically and meaningfully engage in NKS, knowledge economy, and diversity-oriented democracy. In conjunction with critical digital literacies, EP should help teachers and students to develop knowledge and skills for critiquing the “structure”

[‡] As the notion of EP is emergent and situated, the characteristics that I have provided here function as its foundations, not the limitations. Fluidity must be imagined for EP based on the outcomes of one’s rethinking.

[§] See Framework for 21st Century Learning at: <http://www.p21.org/overview/skills-framework>

and “agency” of technology (Archer, 2003) that how technology structures and affordances shape their digital identities such as “second self” (Turkle, 1984), digital habits, thinking, and other capacities to perform in the digitally mediated networked knowledge society, knowledge economy, and diversity-oriented democracy.

Second, *EP integrates “high-level” use of technology with pedagogies*: Unlike the traditional pedagogies, EP cannot be imagined without the involvement of “instrumentality” that technology is integrated with EP as a “mediational means” (Wertsch, 1998), amplifying and generating new “realities” such as new learning opportunities. EP explores new structures and affordances of technology (e.g., Web 2.0, social media, and cloud computing) for teaching and learning. But the integration of technology into EP should not suffer from “low-level” use of technology such as drill and practice, looking up information, and using computer as a dictionary (Cuban, Kirkpatrick, & Peck, 2001; Wenglinisky, 1998). Rather, EP should encourage the “high-level” use of technology (Cuban, Kirkpatrick, & Peck) utilizing it as “mindtools” or “intellectual partners” (Jonassen, 2006) for creativity, collaboration, and multimedia productivities. However, EP does not assume that technology can solve entirely everything, a technological determinism, as portrayed by the majority of the popular “digital native” and “net generation” discourses (Friedman, 2005; Negroponte, 1995; Prensky, 2001; Tapscott, 2008).

Third, *EP is a transformative pedagogical praxis*: Inherent to EP is rethinking or reflective praxis. Praxis is to reflect into one’s own words and actions and derive new set of practices informed by the reflection (Freire, 2000) that transform pedagogical problems into possibilities (e.g., hooks, 1994). There are many critical theory frameworks for pursuing transformative pedagogical praxis such as critical pedagogies (Freire, 2000; Giroux, 1985; McLaren, 1995), critical multicultural education (e.g., May & Sleeter, 2010), critical race theories** in education (Delgado & Stefancic, 2001; Kendall, 2006; Ladson-Billings & Tate, 1995; Taylor, Gillborn, & Ladson-Billings, 2009), feminist pedagogies (e.g., Finke, 1994; Lather, 1991), transformative learning (Mezirrow, 1991), cultural reproduction (Bourdieu & Passeron, 2000), and/or the theories of the posts (e.g., postmodernism, post-colonialism, post-structuralism, etc.). EP utilizes these frameworks, individually and/or intersectionally, to interpret meanings of pedagogies in contexts, especially critiquing and problematizing pedagogies within the contexts of NKS, knowledge economy, diversity-oriented democracy, and critical digital literacies that are described above.

Fourth, *EP practices intersectionality*: EP proactively looks for possible pedagogical intersections within its pedagogical contexts and components (i.e., networked knowledge society, knowledge economy, diversity-oriented democracy, and critical digital literacies). Intersections may include an array of reflective activities, such

** Critical race theories go beyond the black-and-white racial binary to Asian crit, Lat crit, and indigenous theories.

as looking into the intersections, connections, and convergences among the pedagogical contexts and components and practice content teaching and facilitating accordingly.

Fifth, *EP encourages continuous learning and collaboration*: EP cannot be developed and practiced without having a concept of continuous learning. As all the components of EP including technology, pedagogy, content, and society are evolving, teachers need to develop adaptive expertise – shifting expertise but grounded in rethinking and research – to comprehend how these components interplay and influence their own pedagogies. Important to note that the development of adaptive expertise is a relative concept that one's expertise is revealed only when shared and discourses through collaboration within the professional communities (e.g., professional development team, conferences, and seminars).

Finally, *EP embraces and fosters change*: EP involves informed as well as visionary practices. Currently, pedagogies are increasingly becoming as only informed practices (e.g., evidence/research-based teaching) while gradually displacing the “visionary” aspects of education (e.g., Dewey, 1959). The sole focus in pedagogies as informed practices is problematic in a sense that they only respond to the traditionally existing problems or “crises” while closing out the unimagined possibilities of and for the future, and the needed change.

Emerging Pedagogies as a Practice: Teaching with Emerging Pedagogies

Teaching with EP begins with renewed purposes and goals immersed themselves in the characteristics of EP and informed by the epistemic and technological knowledge and skills generated through rethinking and research. Teaching with emerging pedagogies is complex, but an exciting pedagogical practice. The complexity arises from the current networked knowledge society that teachers have to capture its competing “interests and imperatives” (Hargreaves, 2003, p.10), especially the new technologies and the society's expectations of creating, sharing, and discoursing knowledge. In the first place, the network society (Castells, 1996) demands the “high-level” use of technology in classrooms (Cuban, Kirkpatrick, & Peck, 2001). The integration of technology, as it has been already become a “messy process” (Zhao, Pugh, Sheldon, & Byers, 2002), can be challenging for teachers to develop new sets of knowledge, skills, and attitudes by overcoming their own internal (e.g., technology beliefs and attitudes) and external (e.g., digital divide and school policies) barriers (Ertmer, 2005). Secondly, practicing emerging pedagogies within NKS can be challenging as it involves rethinking and developing pedagogies that foster creativity and imagination for students to fill “the ingenuity gap” (Homer-Dixon, 2000). Similarly, practicing emerging pedagogies encompasses a comprehensive understanding of the other evolving contexts including knowledge economy, diversity-oriented democracy, and critical digital literacies.

On the other hand, teaching with emerging pedagogies is an exciting pedagogical practice considering the educational affordances of technology and the new generation of students, who are “digitally growing up” as the net “generation youth” (Tapscott, 2008) and “digital natives” or “i-kids” (Prensky, 2001, 2010). Teachers can bring unprecedented level of learning engagement, and conceivably the enthusiasm, into the classroom by harnessing multimodal affordances of technology, such as hypertexts, images, videos, online and video games, multimedia materials, and cloud computing. With the high-level use of technology, teachers can transform the traditional unidirectional instruction (i.e., from teacher to students) into rich and multi-directional learning experience through creativity and collaboration, such as collaboratively creating, sharing, and discoursing the learning content in multi-modal ways. Furthermore, with the new technologies such as Web 2.0 (Greenhow, Robelia, & Hughes, 2009; Gurung & Chavez, 2011), social media (e.g., Dabbagh & Kitsantas, 2012), cloud computing (e.g., Limbu, 2012; Warschauer, 2011), and other proprietary educational technologies, teaching and learning can transcend the traditional classroom walls by making learning as anytime, anywhere, any device, on-demand, and anybody’s learning. Similarly, today’s students are the “digital natives or “i-kids,” who are not only surrounded by various digital technologies (e.g., computers, tablets, cell phones, MP3 players, videogames, and other “toys and tools of the digital age^{††}”), but also they also “naturally” interact in the technology environment and build “sophisticated” knowledge and skills of using technologies, without any difficulty (Nasah, DaCosta, Kinsell, & Seok, 2010; Prensky, 2010; Tapscott, 2008). Thus, with the combination of the new educational affordances of technology and the “nativity” of students with digital tools and environment, teachers can locate and design new and “exciting” learning landscapes^{‡‡} that were not possible in the past.

Conclusions and Implications

Emerging pedagogies, capturing the strengths and weaknesses of the existing major pedagogical frameworks including TPCK and MCE, sought to establish an interlink between technology, pedagogy, content, and society. I have maintained that the notion of pedagogies is not static, thus, it should be framed as “emerging pedagogies” reflecting the dynamic and shifting landscapes of currently evolving pedagogical contexts (i.e., networked knowledge society, knowledge economy, diversity-oriented democracy, and digital literacies). Development of emerging pedagogies begins with the rethinking of the existing/traditional pedagogies and looking into the interplay between the pedagogical contexts (e.g., networked knowledge society, etc.) and the components (e.g., technology, pedagogy, content, and society).

^{††} See Prensky (2001, p. 1)

^{‡‡} For instances, game-based learning, virtual learning, and online learning.

Emerging pedagogies have promising potentials to interweave technology, education, diversity, democracy, knowledge society, and knowledge economy; and, thereby, pursue meaningful student engagement that suits the today's learners, who are the digital youth – the “digital natives” and “i-kids” (Prensky, 2001, 2010) – who will have to collaboratively work and interact with diverse people, and who will have to create, share, and discourse knowledge on day-to-day basis. However, my broad and general treatment of emerging pedagogies in this paper is merely a “realization” of pedagogical potentials (Dede & Richards, 2012). Theoretical dialogues, research, and practices are necessary to advance the concept and practice of emerging pedagogies. Theoretical dialogues should problematize and put emerging pedagogies into perspectives. Research and “practices” should instigate the process of explaining and interpreting emerging pedagogies for their further development and successful implementation in classroom teaching practices. In so doing, I suggest that future research and theories should locate creative tensions between the emerging pedagogies “as a concept” and “as a practice,” the concept and practice of emerging pedagogies that I have discussed in this article.

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