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Editor's Note

There are not many student-run academic journals, so *The Nebraska Educator* is excited to provide a forum for researchers, scholars, policymakers, practitioners, teachers, students, and informed observers in education and related fields in educational settings in the United States and abroad. Now in our third year, it is exciting to see the work that continues to be accomplished when those interested in educational research have a venue to share their contributions. To date, articles published in the previous two volumes of our journal have been downloaded more than 7,000 times by readers all across the globe.

The Nebraska Educator has four main goals with its published research: (1) to familiarize students with the publication process, (2) to facilitate dialogue between emerging scholars, educators, and the larger community, (3) to promote collegiality and interdisciplinary awareness, and (4) to establish a mechanism for networking and collaboration.

This publication would not have been possible without the guidance and assistance from faculty, staff, and graduate students across the College of Education and Human Sciences. We are also grateful for the work of Paul Royster at Love Library, who assisted us with the final formatting and online publication of our journal. In addition, we would like to thank the Department of Teaching, Learning, and Teacher Education's Graduate Student Association, whose financial contributions helped to launch our journal.

The Nebraska Educator is an open-access peer-reviewed academic education journal at the University of Nebraska-Lincoln. This journal is produced by UNL graduate students and publishes articles on a broad range of education topics that are timely and have relevance at all levels of education. We seek original research that covers topics which include but are not limited to: (a) curriculum, teaching, and professional development; (b) education policy, practice, and analysis; (c) literacy, language, and culture; (d) school, society, and reform; and (e) teaching and learning with technologies.

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Abraham Flanigan and Kristine Sudbeck
Co-Editors-in-Chief, 2016



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Additionally, we are excited to announce the newly formed editorial board that will oversee development of the fourth volume of *The Nebraska Educator* in 2017.

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Examining Doctoral Attrition: A Self-Determination Theory Approach

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Abstract

Doctoral student attrition is a troubling and costly phenomenon. Alarming, 40-60% of doctoral students will not complete their Ph.D. Several explanations for this high and persistent attrition rate have been discussed in the extant literature, including questioning the quality, mental health, and motivation of doctoral students. However, stricter admission standards and empirical evidence provide little support that any one of these current explanations is adequate on its own. Empirical clues suggest that Self-Determination Theory may be useful in trying to understand the doctoral attrition phenomenon. Self-Determination Theory is presented and used as a framework to identify potential causes and barriers in the doctoral student experience that may lead to drop out. These issues are discussed and preliminary suggestions for potential strategies to rectify these issues are given.

Keywords: self-determination theory, doctoral attrition, autonomy, education

Picture the typical doctoral student – probably a high achieving young man or woman who shows interest in a topic that few people outside of his or her chosen field are even aware of. Individuals not privy to the inner workings of academia probably imagine this graduate student with few or no problems. This graduate student is somewhat likely to be receiving a stipend from his or her university, is obviously very intelligent and dedicated, and is receiving a level of education that most people will never attain (i.e., a doctorate). However, academic insiders (those aware of the graduate school process) probably picture this graduate student very differently. For example, these insiders might be aware of the rigorous courses a graduate student must take, the high pressure to generate novel research topics, or the time consuming and sometimes competitive assistantships and fellowships that are necessary if the graduate student wishes to receive their stipend. For academic insiders, with their knowledge of the stress and rigors of graduate school, it is likely not a surprise to learn that graduate students (doctoral students in particular) have a somewhat high rate of attrition - leaving the doctoral program before completion. However, even when attrition is expected, the actual numbers are quite shocking; several (slightly dated) studies place doctoral student attrition rates as high as 40 – 60%. This attrition rate has also remained surprisingly consistent (Lunneborg & Lunneborg, 1973; Golde, 2005; Lovitts, 1996; Pauley, Cunningham, & Toth, 1999; Wright, 1964). For the purposes of this paper, *doctoral students* will be defined as individuals earning a research intensive doctorate in any subject other than medicine. While high attrition rates potentially exist for students obtaining a doctorate in the medical fields, discussing the medical student population is not within the scope of this paper. Likewise, other professional and graduate students (e.g., students obtaining their master's degree) will not be the focus of this work. Though these populations are important, they should be the subject of future research as the populations may differ in some unforeseen manner(s).

Extant Explanations of Doctoral Attrition

Graduate student quality

One of the more troubling and pervasive explanations offered for the high and persistent doctoral student attrition rate is that programs are

admitting low quality students. As graduate students represent a large financial investment to universities, they have sought to address the issue of doctoral attrition from this “student quality” perspective. As a result, universities have increased their already stringent admissions criteria over the years. Interestingly, these increased admission standards have had little, to no, effect on the attrition rate (Lott, Gardner, & Powers, 2010; Lovitts, 1996; Lovitts & Nelson, 2000). This suggests graduate student quality is not the cause of the high and persistent attrition rates and that another explanation/perspective is necessary.

Mental health

Another common explanation for high and persistent doctoral attrition is the high rate of poor mental health and low well-being reported by graduate students. Indeed, the rates of poor mental health in graduate students are shockingly high, with some studies putting the prevalence at 25 - 47% in some populations (Hyun, Quinn, Madon, & Lustig, 2006; Stecker, 2004). Taking the high attrition rate (40 – 60%) and attributing it to the high rate of poor mental health makes *some* logical sense: it would no doubt be more difficult to complete a doctoral program while experiencing mental health issues than it would be while experiencing no mental health issues. However, research has not completely supported this connection (Bair & Haworth, 2004). While it is likely that mental health and well-being plays some role in doctoral student attrition, it cannot be considered adequate explanation for the phenomenon alone.

Motivation

Motivation is the most common explanation given for the high and persistent doctoral attrition rate. In contrast to the previous explanations of doctoral attrition (quality and mental health), there is a somewhat large body of research that supports motivation as having a role in doctoral attrition. Generally, this research finds that motivation is a strong predictor of doctoral completion, or that lack of motivation is commonly reported by individuals whom have dropped out of their perspective doctoral program (Bair & Haworth, 2004; Cooke, Sims, & Peyrefitte, 1995; Lovitts, 1996; Pauley, Cunningham, & Toth, 1999; Wright, 1964). While motivation no doubt plays a role in doctoral attrition, offering it as the only

explanation for the attrition has some serious flaws. It has been noted by a small group of researchers that explaining doctoral attrition solely with lack of motivation is unduly unfair to doctoral students, as it suggests the issue is person centered and takes blame from the university and the institutional culture (Lott, Gardner, & Powers, 2009; Lovitts, 1996; Nesheim, Guentzel, Gansemer-Topf, Ross, & Turrentine, 2006; Smith, Maroney, Nelson, Abel, & Abel, 2006).

While these and other models attempting to explain doctoral attrition are present in the extant literature, they all leave something to be desired. Each model tends to focus attention on either the individual or the institution; no model allows for a complex interplay between the individual and institution. The current work will propose an explanation for this attrition rate based on Self-Determination Theory (SDT) in an attempt to reconcile this issue; giving an equal focus to the individual and the institution. This article will focus on providing explanation and justification for SDT as an applicable explanation for doctoral attrition. The article will also attempt to provide preliminary attempts at identifying potential strategies (relevant to SDT) which could reduce this high and persistent attrition rate which could be implemented by doctoral students or doctoral programs.

Self-Determination Theory

This paper will attempt to give a brief overview of SDT before discussing graduate student issues within the theoretical context. For a comprehensive discussion about SDT, see Ryan and Deci (2000). Self-determination theory focuses on three innate, psychological needs that an individual requires to function at their “best”. Specifically, these three needs are autonomy, competence, and relatedness. The theory posits that if an individual has these needs met, he/she will be more motivated and experience better mental health than if these needs are not met, or are not met adequately (Ryan and Deci, 2000). It is important to note that all the needs work in tandem, and autonomy serves as the linchpin (i.e., an individual cannot function at their best if only the needs of competence and relatedness are met).

Autonomy

Littlewood (1996) attempted to define autonomy by breaking it down and examining the components; he started with the basic definition of an autonomous person being one who can make, and carry out, decisions to govern his/her own actions. Littlewood also identified two main components of autonomy: *ability* and *willingness*. So, an autonomous person must have the ability to make independent choices as well as the willingness to do so. These components are highly dependent on the individual's environment. For example, an individual could possess the ability to govern his/her decisions but lack the willingness to do so because he/she is used to a controlling environment. Conversely, an individual could be willing to govern his/her own decisions but lack (or perceive that he/she lacks) the necessary skills. This is an interesting model as it views autonomy as the "natural" state of individuals (which fits nicely with SDT). Autonomy and autonomy supportive teachers have been associated with increased classroom performance, increased intrinsic motivation, and a stronger sense of competence across several age groups (Ciani, Middleton, Summers, & Sheldon, 2010; Garcia & Pintrich, 1996; Littlewood, 1996; Reeve, Bolt, & Yi Cai, 1999).

Competence

Competence is a complicated construct; it has been confirmed (Rodgers, Markland, Selzler, Murry, & Wilson, 2014) and refuted (Hughes, Galbraith, & White, 2011) that competence and self-efficacy are distinct constructs. However, for the purposes of this work, perceived self-efficacy and perceived self-competence will be considered to have negligible differences. Competence plays a role in autonomy and is also directly related to motivation (Littlewood, 1996). Fostering competence in the classroom generally involves providing tasks for the students that are not too hard, nor too easy, and providing positive feedback on the tasks. It is important to note, however, that positive feedback will generally only improve intrinsic motivation if provided in an autonomous supportive environment (Deci, Vallerand, Pelletier, & Ryan, 1991). Competence also plays a role in internalization in SDT. An individual will be more likely to internalize a task (i.e., perform a task based on intrinsic rather than extrinsic motivation) if he/she feels skilled at performing the task (Deci & Ryan, 2000).

Relatedness

Relatedness is related to attachment theory in that children will explore tasks if they have a secure attachment (Bowlby, 1979). Self-determination Theory extends this finding from attachment theory across the lifespan – positive, secure attachments (i.e., relationships) are posited to increase intrinsic motivation. A big component of SDT is the integration/internalization of extrinsically motivated behaviors into intrinsically motivated behaviors. It is posited that individuals are extrinsically motivated to perform new behaviors or tasks during his/her formative years. However, over time, the individual will begin to perform these tasks via intrinsic motivation through the process of integration and internalization (Niemiec & Ryan, 2009; Ryan & Deci, 2000). Relatedness plays a large role in encouraging individuals to integrate and/or internalize extrinsically motivated tasks. In order to feel belongingness or closeness to certain people/groups of people, an individual will seek to internalize tasks that are highly valued or modeled by that person/group of people. The desire for internalization of a task (i.e., the desire to “fit in” with the individual or group that values or models the task) can stem from peers to teachers to parents (Deci, Vallerand, Pelletier, & Ryan, 1991).

Graduate students under the SDT lens

If we consider doctoral attrition under the SDT lens, it is possible that the high attrition rate is due to the three SDT needs not being met. The high doctoral attrition rate could be directly related to low intrinsic motivation, which would support and extend past research findings regarding motivation and attrition. Interestingly, it has been shown that unmotivated students are more likely to drop courses, and by extension, drop out completely (Pantages & Creedon, 1978; Ramist, 1981; Vallerand & Bissonnette, 1992). In fact, Vallerand and Bissonnette showed that Canadian college juniors who had higher intrinsic motivation and less amotivation toward academic activities were less likely to drop a required course. Conversely, individuals with lower intrinsic motivation and more amotivation toward academic activities were more likely to drop the required course. Additionally, Ramist and Pantages and Creedon also found that motivational factors were the most common reasons given by undergraduates that had dropped out of college completely. There is also a high

prevalence of mental health issues that appear in cross-sectional examinations of graduate students (Hunt & Eisenberg, 2010; Hyun, Quinn, Madon, & Lustig, 2006; Stecker, 2004). This increased prevalence of mental health issues could directly stem from the lowered well-being experienced by individuals who are not achieving their SDT needs. Taking this potential evidence, the three needs defined by SDT should be examined in the context of graduate students in an attempt to identify what barriers may be causing the inadequate fulfillment of the SDT needs.

Barriers to Autonomy

As previously discussed, each of the three needs within SDT operate in tandem. As such, autonomy is not only a direct need; it also plays roles in both competence and relatedness (Deci & Ryan, 2000). Adopting Littlewood's (1996) definition of autonomy, there are two factors that define autonomy: ability and willingness. So, a graduate student that is not autonomous will lack (or perceive that he/she lacks) the ability to make his/her own decision or lack the willingness to make his/her own decisions. Littlewood further broke ability and willingness down into two subcomponents. Ability was broken down into *knowledge* and *skills* while willingness was broken down into *motivation* and *confidence*. The lack, or perceived lack, of ability can stem from many sources. However, the perception of knowledge and skills is highly vulnerable to the *imposter phenomenon* (IP; Clance & Imes, 1978; McGregor, Gee, & Posey, 2008).

The imposter syndrome or the imposter phenomenon is the phenomenon in which individuals that are empirically successful feel inadequate and incompetent. Individuals suffering from IP generally attribute their successes to luck or other factors outside of their control rather than personal ability (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; Kumar & Jagacinski, 2006). The imposter phenomenon was originally posited to exist only in high achieving females but studies have shown that IP presents in high achieving males as well, albeit at lower rates (Cozzarelli & Major, 1990; Prata & Gietzen, 2007). Though no studies have been conducted examining the prevalence of IP in general academic doctoral student populations, small studies looking at the prevalence of IP in medical graduate students place the rates at (approximately) 20% for males and 40% for females (Oriel, Plane, & Mundt, 2004; Prata & Gietzen, 2007).

It is possible that the ability factor (comprised of knowledge and skills) of autonomy is barred by the experience of IP in many graduate students. As these two components (and four subcomponents) must be working in unison to achieve autonomy, it is likely that an individual suffering from the imposter syndrome would never achieve autonomy (Littlewood, 1996). Additionally, the willingness component (comprised of motivation and confidence) of autonomy is vulnerable to IP as well as institutional sources. An individual who believes himself or herself as intellectually inadequate is destined to have issues with his or her confidence. Institutional/environmental factors may also affect autonomy. For example, health issues could prevent a student from being in class, therefore preventing that student from obtaining the necessary knowledge or skills for completing important tasks. Another example would be a student who has an overbearing or controlling advisor; this student likely lacks the confidence or motivation perform tasks without provocation as he or she is rarely allowed to do so.

Taken together, it can be posited that strategies aimed at improving autonomy should focus on lessening the impact of the imposter syndrome (to improve perception of ability) and creating autonomy friendly learning environments, rather than control based learning environments. Much work has already been done in the area of identifying and creating autonomy focused environments and teachers (see, Reeve, Bolt, & Cai, 1999; Ciani, Middleton, Summers, & Sheldon, 2010; Stefanou, Perencevich, DiCintio, & Turner, 2004, for a few notable examples). Strategies outlined in these works could be applied at both the course level and the advisor level. This would provide doctoral students with autonomy fostering environments both during their coursework and with research and work done with/for their advisor. IP would also need to be addressed to foster autonomy. The group therapy methods outlined in Clance and Imes (1978) could prove a useful tool for confronting imposter syndrome as well as providing doctoral students with an opportunity to form relationships (which could potentially help students foster relatedness). In this method, individuals are made aware of the improbability that they are imposters. It also incorporates positive feedback and homework assignments. It is possible that departments or programs could offer weekly sessions to doctoral students who would wish to attend such group therapy.

Barriers to Competence

Competence involves understanding and being efficacious at achieving various outcomes and tasks (Deci, Vallerand, Pelletier, & Ryan, 1991). Potential barriers to a person achieving competence are fairly straightforward as competence is directly threatened by IP. Recall that IP is the phenomenon in which successful individuals feel intellectually inferior to their colleagues. The imposter phenomenon has been associated with persons having an external locus of control, that is, these individuals attribute their successes to external influences rather than ability or intelligence (e.g., luck; Clance & Imes, 1978; McGregor, Gee, & Posey, 2008). It has also been demonstrated in the literature that perceived self-efficacy is related to locus of control, with an external locus of control leading to lower perceived self-efficacy (Judge & Bono, 2001; Phillips & Gully, 1997). As such, it can be logically concluded that a doctoral student experiencing IP would perceive their academic achievements as being a result of external forces. This, in turn, would lead to the doctoral student having low perceived self-efficacy for academic tasks, resulting in low perceived competence. Finally, this low perceived competence in the individual would undermine the other components of SDT, leading to lowered motivation and poor well-being.

Taken together, addressing IP or the external locus of control is paramount when addressing the need for competence. As before, the Clance and Imes (1978) group therapy method seems like a good choice to confront the imposter syndrome. Though the therapy already incorporates positive feedback, additional efforts could be made to provide students with more positive feedback both from advisors and courses. As positive feedback has been shown to improve self-efficacy (Chemers, Hu, & Garcia, 2001; Schunk & Swartz, 1993; Shute, 2008), it is likely that it will improve competence as well. Additionally, utilizing journaling and other cognitive-behavior therapeutic (CBT) methods have been shown to effectively shift an individual's locus of control from external to more internal (Fritson, 2008). A combination of these CBT methods, group therapy, and positive feedback should effectively reduce the impact of the imposter phenomenon.

Barriers to Relatedness

Relatedness was defined by Deci, Vallerand, Pelletier, and Ryan (1991) as having secure attachments and fulfilling interactions with others in a relevant social group. Relatedness is difficult for doctoral students to achieve because of the nature of completing a doctorate. Over the course of the doctorate, a student will spend many hours studying, conducting research, writing, reading, etc. – all largely solitary activities. Even if a doctoral student is able to complete all of these tasks and has additional free time to socialize, it is unlikely that his or her peers have also completed these solitary activities and are in a position to socialize. The doctoral student experience is likely a lonely experience for many, with few opportunities to foster these fulfilling relationships with other doctoral students. Interestingly, studies that have examined this phenomenon of social isolation (or lack of relatedness) have found that doctoral students who report feeling socially isolated or “lonely” are more likely to drop out of their program (Ali & Kohun, 2007; Bain, Fedynich, & Knight, 2010). Outside of SDT, social support and social interaction have been shown to increase well-being in a wide variety of demographics (Cohen & Wills, 1985; Ishii-Kuntz, 1990; Lee & Ishii-Kuntz, 1987).

A doctoral student who has achieved relatedness would probably socialize with his/her cohort, office mates, or other individuals from the program or department both in and out school. This doctoral student would also likely have a satisfying relationship with his/her advisor as well as other faculty within the department or program. Potential strategies to address the need for socialization (i.e., relatedness) should focus on giving doctoral students the opportunity to socialize within their program/department. These opportunities could include: orientations and scheduled social events for new students, adopting the cohort system for groups of students, providing shared work space for groups of students (i.e., shared offices), support groups for various stages of the doctoral process, and an advisor that interacts with students collaboratively (Ali & Kohun, 2007). By offering doctoral students so many opportunities to socialize and by assigning them into “groups” (i.e., cohorts), the likelihood that they form satisfying relationships with their peers should increase.

Limitations

It is important to note that student accountability will play a role in the effectiveness of these strategies and no doubt plays a role in doctoral attrition in general. Programs could provide all of the proposed resources but if doctoral students choose not to utilize these services then the resources would be wasted. It should also be stated that the discussion and identification of strategies designed to foster autonomy, competence, and relatedness in this work was in no way exhaustive. This work was meant largely as a theoretical work attempting to create discussion about doctoral student attrition. As such, no empirical data was offered to substantiate the application of SDT to the attrition problem. Therefore, the focus of future research should be attempting to obtain empirical evidence that SDT is indeed applicable to the doctoral student attrition issue.

Discussion

In this article, SDT is introduced and logically applied to the issue of doctoral student attrition. Potential strategies related to fostering autonomy, competence, and relatedness in doctoral students were then identified to offer suggestions to reduce the attrition rate and to provide potential landmarks for researchers examining this issue in the future. It is important to note that this article is not suggesting that a 0% doctoral attrition rate is achievable or desirable. However, the current persistent and alarmingly high doctoral attrition rate is an issue that needs to be addressed.

Applicability to Non-traditional Students

It should also be noted that the article also does not take into account non-traditional doctoral students with its proposed strategies. Non-traditional doctoral students might include distance or online students, students with families, part-time students, or individuals who are much older than the typical doctoral student (i.e., late 20s or early 30s). Unfortunately, there is evidence to suggest that non-traditional students have a more difficult doctoral experience than traditional doctoral students (Gardner, 2008). If this theory proves applicable to traditional doctoral students its applicability to non-traditional doctoral students

should also be examined. However, if SDT was also applicable to non-traditional doctoral students it is likely that there would be significant challenges when applying the strategies identified here. The challenges associated with autonomy and competence would likely be similar to those found in traditional doctoral students, but the relatedness component of SDT would potentially be more difficult to achieve for these students. For example, consider a distance/online student, an older student, and a student with a family. The distance/online student would suffer from not being able to physically attend social functions provided by a class or department. While cohorts and support groups could be set up online, the logistics (e.g., getting everyone online at the same time) would be more difficult. Additionally, online/distance learners would not be able to benefit from having shared offices with other graduate students or attending on orientations with other students in a similar position. For older students, age and interest differences could make it more difficult to form the satisfying relationships required to satisfy the relatedness component of SDT. The barriers for students with families would likely be related to time commitment issues – these students might just not have the time to socialize outside of the classroom with their peers. Instead, their time commitments would be made to their families. Taken together, it is likely that new strategies would be needed to foster relatedness in non-traditional students.

Although this work focused on issues with doctoral students, autonomy, competence, and relatedness should be kept in mind when dealing with students of any type, as the lack or presence of these components can have significant consequences. Based on the work and arguments provided by this work, it seems logical SDT is not only applicable to the doctoral student attrition problem, but that implementation of the stated strategies could help decrease this high and static attrition rate.

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Korea and the Dominican Republic: A transnational case study-analysis

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Abstract

The study of transnational movement and the lives of individuals who cross nation-state boundaries has grown in recent decades. Transnational study regarding the Dominican Republic has continued since migrations to the U.S. in the 1960s and has primarily focused on “transnationalism from below” (Smith & Guarnizo, 2002) narratives, while study of South Korean transnationalism has focused on movement motivated by access to English in order to assure access to the competitive job market and opportunities for social mobility. This pair of case studies examines the lives of two relatively privileged Korean students who lived transnationally between Korea and the Dominican Republic over a prolonged period of years. The purpose of the study is to examine how transnational movement has influenced the lives of these students and their identities.

Keywords: transnationalism, South Korea, Dominican Republic, identity

“I’m headed home!” captioned the photograph of an airline ticket with a destination of a city in the Dominican Republic. Over the next few days my social media newsfeed filled with photographs of some of my favorite Dominican places with more than a few “selfies” Clara (pseudonym) had taken with friends and family. One of these photographs captured a family dinner with Clara’s parents and younger brother and it was captioned, “There’s nothing like my mom’s *kimchi*!”

While there has been substantial research conducted about the transnational lives of Dominicans (Grasmuck & Pessar, 1991; Guarnizo, 1997; Levitt, 2001), transnational research concerning South Korea has been limited until recent years. Park & Lo (2012) explain, “The rapid globalization of Korean society has given birth to new modes of migration that have brought about a significant transformation in the ways in which Koreans imagine their position in the world” (p. 148). Research regarding Korean transnational movement involves a trend within Korean society called *jogi yuhak* (early study abroad). This strategy is commonly carried out with *kirogi* (wild goose) families, “families that are separated between two countries for the purpose of children’s education abroad” (Lee & Koo, 2006, p. 533). Exposing children to authentic opportunities to acquire English is “a transnational strategy of middle-class (and some working – class) South Koreans for securing capital for class maintenance and reproduction” (Song, 2012, p. 202).

Emphasis on English education (*yeongeokyoyuk*) in Korea began in the early 1990s when “the Korean government decided to include English listening tests into the national college entrance examinations (Park, 2009). South Korean transnational research has focused on this strategic and temporary migration to countries like New Zealand or the United States where children can learn English (Block, 2012; Collins, 2009; Park & Abelman, 2004; Stevens, Jin, & Song, 2006). There is an absence of inquiry regarding South Korean transnational migration that contrasts with this paradigm. The following two case studies contain narratives that do not ascribe to the current South Korean transnational patterns. The primary motivation for each participant’s family to move away from South Korea was for a parent’s employment with a multinational corporation. While it turned out that the city in which these two families lived had private school with U.S. accreditation where English and Spanish were both languages of instruction, this was more the result of serendipity than sagacity. It is possible that the existence of these transnational realities or

identities that do not have a space in the current taxonomy are “to some extent, not seen” (Zúñiga & Hamann, 2009, p. 329). The purpose of this study is to describe two such cases in order that they may be recognized and perhaps that such cases may be the focus of broader study and understanding of transnational experiences.

In order to assess how the lives of these students contrast from others’ in the field of research, I have used case-study methodology as a way to gain insight into the lived experiences of two relatively privileged South Korean students who lived in the Dominican Republic and South Korea throughout their schooling experiences. My primary research question was: How does extended transnational movement between South Korea and the Dominican Republic affect students’ identities and schooling experiences?

Methods

Given this study’s focus on the experiences of students who have educational experiences both in South Korea and the Dominican Republic, I used purposeful sampling for maximum variation of responses for this intrinsic case study (Creswell, 2013; Stake, 1995). Participants’ transnational experiences fit within the bounded case of the study. Each participant spent time in the Dominican Republic and returned to South Korea for post-secondary study, but their family make-up and circumstances, as well as their experiences allow for nuances among the cases (Creswell, 2013; Stake, 1995; Yin, 1981). One participant returned to South Korea with her family following high school and the other participant left her family in the Dominican Republic in order to attend university in South Korea.

The selected participants were students whom I taught in my three years teaching (throughout a space of six years) at a small American school (SMCS) in the Dominican Republic. Five years after I returned to the U.S., I had the opportunity to travel and research in South Korea. Throughout the course of those five years, I maintained contact with participants in order to provide support as their former teacher and in order to better understand their transnational experiences as a researcher

While this study references multiple years of interaction, the data collected for the study which included student journals, semi-structured interviews, observation and fieldnotes, and informal email correspondence,

was collected over a six-month period. Prior to my trip to Korea and following the return of consent forms, I sent initial journal-prompts to both participants. Journal-data was collected through email and follow-up semi-structured interviews were conducted via Skype. Interviews were audio-recorded digitally, transcribed, and stored. Fieldnotes were kept in narrative journal format and include my recollection of students' quotations as well as the descriptive contexts that provided a backdrop to our conversations and shared experiences. Students were informed that their privacy would be protected with the use of pseudonyms.

Stake, in his 1995 text *The Art of Case Study Research*, explains, "There is no particular moment when data analysis begins. Analysis is a matter of giving meaning to first impressions as well as to final compilations" (p. 71). Although my analysis was ongoing through reflective journaling, I began my post-data collection and formal analysis by looking for patterns related to my research questions within participants' responses through categorical aggregation as well as through direct interpretation (Creswell, 2013; Stake, 1995). I accomplished this through multiple readings of participant responses, coding and recoding patterns, breaking down individual responses, and constructing meaning based upon the themes that emerged. (Stake, 1995). After identifying patterns, I examined the data looking for correspondence within each case as well as among the cases (Creswell, 2013; Stake, 1995). From there, I extracted naturalistic generalizations (Creswell, 2013; Stake, 1995) that contribute to understanding transnational lives and specifically South Korean transnational narratives that don't match the *jogi yuhak* (early study abroad) or *kirogi* (wild goose) families, most commonly found in the current body of transnational research on South Korea. In an effort to provide a level of verification for my data-analysis I invited participants to member-check my drafts in order to triangulate my results (Stake, 1995). I sought patterns within the data for data source triangulation (Stake, 1995). My initial research question focused more broadly on the transnational experience and its influence on students' identities. These cases illuminated the presence of a student whose transnational experience was unique as it was not primarily motivated by access to English. And both participant identities reflect a cosmopolitan dimension.

What follows is a pair of case studies, each organized with the student's narrative. Each section contains the participant's voice and draws upon the history and relationship I have with each. Toma (2000) describes this

disposition as “subjective qualitative research,” where the researcher becomes an insider—a partner with the subject who is responsible for bringing the subject to life for the reader’ (p. 182). The cases are followed by a discussion and recommendation for future research regarding a transnational narrative that contrasts with the most common story of transnational movement coming from South Korea.

The Case-Studies

Eun Jung. Eun Jung’s brow furrowed as she leaned over the three open books on her desk: a Korean-English dictionary, a Korean graphic novel of *Romeo and Juliet*, and an English version with a parallel modern English translation. With her pencil, she marked Korean symbols above the English text. It was painstaking.

Eun Jung moved with her family from Korea to the Dominican Republic for her father’s job in the summer before her freshman year of high school. She explained,

It was hard for me to study in the Dominican Republic for the first few years because I didn’t know any English or Spanish. My first two years I was homesick for Korea. I wasn’t ready for a new country, languages, culture, or new people. Also, it was really hard to learn two languages at the same time. It was a big change but I think I gained aspects from school (SMCS) that is more free. The life of a student in Korea is really tough. Parents and teachers put pressure on them to make good grades. They stay very, very, very long in school and most of them have to go to educational institutions of math, English, piano, taekwondo, or others. In the Dominican Republic students say their opinions in front of the class there is a good mood and different teaching. There’s definitely less tension in the Dominican Republic.

It took a while for Eun Jung to find her place among her class however, there was another Korean student who knew neither English nor Spanish who came to SMCS at the same time; they formed a support for one another. By the time she was a senior, Eun Jung had acquired enough English and Spanish that, “I hung out with my Dominican friends a lot. We went on a senior cruise and we all had anatomy together. Returning to Korea, I was very lonely for them.”

Unlike many of the students from South Korea living in the Dominican Republic, when Eun Jung moved back to Korea for university her entire family returned with her. After four years living in the Dominican Republic, Eun Jung said:

It was really hard to get used to life in Korea. The hardest thing was that I didn't have any friends in Korea to talk about my worries. For the first year I missed my friends and people in the Dominican Republic so much. I also missed the free and lovely life we had there. My family had to restart from the bottom. We didn't have much money to buy the house and our furniture or household items.

Eun Jung told me this while we sat at a coffee shop in Seoul. She paused to smile and then said, "I was excited to eat Korean foods. I really missed Korean food. And Korean dramas and other Korean shows!" Eun Jung struggled to readjust to life back in South Korea in her interpersonal relationships as well.

The senior-junior relationship is very important in society here. They have to use formal language to the ones who are older than you. It was hard for me to adapt to this culture in Korea when I returned because Dominicans do not care about the senior-junior relationship. If they are not close in age it doesn't matter, they can be friends. Koreans just can't see treating your seniors (elders) as friends.

When she returned to South Korea, Eun Jung began studying Mass Communications at Incheon University, one of Korea's national universities. "My favorite courses are marketing and advertising," Eun Jung explained, "but my Korean is weak because I didn't study in Korean for a long time. My friends have helped me when I didn't know Korean or Korean history or politics." Eun Jung described how knowing English has been an asset stating:

I think the biggest difference between Korean students and me is that I know English. Actually, in my university there are many classes that are being taught in English. I already studied at a higher level in English at SMCS. Sometimes my friends expect me to know everything about English. It has been a little burden for me.

While Eun Jung had more years of university ahead of her at the time of this study. Eun Jung imagined her future and plans involving a life outside of Korea. “I want to live in Korea before I get married, with my family. I want to raise my children in another country like the United States or the Dominican Republic.”

Eun Jung’s experience contrasts with the typical South Korean transnational narrative where short-term transnational movement is primarily motivated by access to English. While Eun Jung acknowledges that the plan for her father to take a job in the Dominican Republic did not ensure the hoped for upward social mobility upon their return to South Korea, her high school diploma from a fully accredited American school where her coursework was in both English and Spanish, did support her entrance into university. She does not plan to leverage her command of English for her own social mobility in South Korea post-graduation, however. Instead, she hopes to leverage her knowledge of English and Spanish for a transnational future she imagines back in the Dominican Republic or the United States.

Chung Cha (Clara). As a first-year teacher, I spent most of my lunch hours in my classroom trying to keep my head above water. Clara and a small band of Korean students made their classroom a refuge from the heat and sun and chatted away in a mix of Korean, Spanish, and English. I temporarily left the Dominican Republic following Clara’s seventh grade year but returned when she was a junior and taught her throughout her junior and senior years of high school. Clara had become a mentor to new Korean arrivals at school (like Eun Jung) helping with homework, explaining Dominican culture, and planning activities for the “Korean Crew” who gathered on the high school stairs at lunchtime.

Clara and her family moved to the Dominican Republic when she was five and she spent ten years studying at SMCS. Despite her years at the school she explained that,

It was very hard to be a part of the Dominicans’ group because of the language barrier and my appearance. Even in pre-school, the kids asked me questions like, “Why are your eyes like that?” or “Why is your skin yellow?” I didn’t know how to answer so I just ignored them. In junior high it was terrible. I had great friends who understood me, but there were some other groups of friends who made fun of my race. The worst thing was when

they called me ‘Chinese’ even though they knew I wasn’t one. My classmates saw me as the ‘nerd’ of the class but I loved helping them with their homework and I think that is what made me finally fit into their group. Moving into high school my classmates were nicer to me and the mocking stopped. Everyone accepted me for who I was and no one called me ‘Chinese’ anymore. I was so thankful that they just called me by my name.

Just as she was one of the first South Korean arrivals at SMCS, who served as a mentor for Korean students who followed after her, in returning to Korea she has maintained her role as mentor as other SMCS Korean students have since returned for university. Clara was accepted to Seoul National University (SNU) and decided to major in pharmacy. She explained that,

I was excited to come to Korea because I knew that Korean society was very developed and I wanted to see all the tall buildings. I wanted to ride the train, subway, and visit all the different places that I had not seen before. I wanted to see my aunts, uncles, and cousins. But it was hard because it had been so long since I had lived in Korea. I didn’t know much about Korean society, prices, where to ask for help.

Clara described how her transnational experience shaped her identity and how she felt different than peers who lived their entire lives in South Korea. “I identified myself as a Dominican more than a Korean because I was more familiar with Dominican culture than the Korean culture. Music and dancing is a part of my everyday life, thinking positively and not worrying about every single thing in life—these are aspects that make me different than most Koreans.” Like Eun Jung, Clara also struggled with some of the cultural transitions including those related to age and respect. She said:

In Korea it is very strict when dealing with people who are older than you. You have to speak with respect and treat them as if they are a higher position than you even if you are very close in age. Another cultural piece is the speed; your actions have to be in perfect condition while being very fast or efficient. It sometimes seems that we are robots. For these reasons, at first, when I came back to Korea from the DR, it was hard to adapt. In the DR when you were introduced to new people they would all treat

you as a friend you have known for a long time. In Korea it was so hard to keep track of how to deal with certain types of people.

Clara struggled in adjusting to South Korean culture and with feeling 'homesick' for the D.R. and her family who had remained in the Dominican Republic. She said:

I was so homesick for the D.R.. My parents are still there and I wanted to see them and be with them. I missed all my friends, the culture, the food, the beach, and school life. The D.R. and Korea are two very different countries so it was hard to adjust. I still get homesick. My parents call me every day to check up on me and we tell each other what is new. They remind me to cheer up and to keep up the good work in Korea.

Clara established a network of friends at SNU and also maintained connections with her transnational peers, coordinating reunions of SMCS students in and around Seoul for dinners to reminisce and provide support. She described the challenge of having friends who did not share her transnational schooling experience and how difficult she found it, at times, to explain her experience of living and going to school in the Dominican Republic.

My friends here say they understand about living in another country but I don't think they really care much about it. Korean students who have lived their whole life in Korea are very competitive and selfish in some ways. When there is a chance of winning in a contest or any other things, they always say that they have not prepared much or that they are not good at something. However, in actual performance, they show that they have practiced and prepared beforehand. They are eager to win. On the other hand, from what I have seen in my friends who have lived in the DR and in other countries, they are supportive and care about each other. My friends here don't understand all my good memories from SMCS the teachers, my friends, the after school activities, sports, fair day, drama, the community. There are things that a Korean student will never imagine or understand. They would ask me, "How could you hang out with teachers?" I would tell them, "Why not? Teachers are great friends too!" But that idea is hard for them to understand.

When I asked her about where she sees herself living in her adult-life, Clara said:

I am planning on getting my master's degree in Korea. After that I would like to work in the hospital or pharmaceutical company. However, if I get the opportunity I would like to challenge myself to study medicine and to become a doctor...until I have kids I want to live in Korea. After I get married and have kids, I want to live abroad for my kids.

Clara's experience also contrasts with the typical South Korean transnational narrative Clara's entire school experience prior to university happened in the Dominican Republic and despite the challenge as a preschooler feeling like an outsider among her Dominican peers, she describes herself now as being more Dominican than Korean. Clara's family moved to the Dominican Republic for her father's job in order to secure social mobility upon the return to South Korea, but nearly twenty years later, the family remains in the Dominican Republic. Clara also plans for a future transnational life following her university graduation and hopes her children experience life outside South Korea.

Discussion

Unlike the transnational narratives of Korean families in pursuit of experiences that enable their children to acquire English, these cases illuminate the narrative of transnational students whose move was primarily motivated by family social mobility and was more permanent, in the case of Clara's family. While it turned out that these students did gain access to English language instruction as a result of their families moves to the Dominican Republic; their narratives are not represented among the transnational literature regarding South Korea, which *primarily* focuses on "Korean goose families," whose moves are temporary and motivated by access to English for children to acquire before returning to South Korea for exams that will determine students' future university placements.

Themes that emerge from these two South Korean transnational cases include strands evident elsewhere in the field. Both Eun Jung and Clara shared examples of not fitting completely in either place. Each struggled that in returning to Korea there was a level of 'missing' what they left

behind in the Dominican Republic and identify a different outlook on life they particularly missed from their Dominican life. Eun Jung described this as “a free and easy way of life,” and Clara described how challenging it was to adjust to the “speed” of life back in Korea, stating that, “your actions have to be in perfect condition while being very fast or efficient. It sometimes seems that we are robots.” Clara lamented, “The D.R. and Korea are two very different countries so it was hard to adjust. I still get homesick.” Smith (1994) describes the transnational experience as, “[t]his multiple-conception of home or of being ‘neither here nor there’ (p. 17), which has a place in the literature as a third-culture transnational construct or *ethnoscape* (Appadurai, 1996).

Eung Jung and Clara described their struggle to fit in with peers on either side of their transnational divide. Within their experiences at SMCS, Clara and Eun Jung maintained connections with South Korean peers as well as developing friendships with Dominican classmates. Clara, as the Korean student who had spent the most time at SMCS, became a mentor in the Korean community at school. She assumed this role after she returned to South Korea as she welcomed other SMCS students upon their return, organizing reunions among the group spread out in various universities in and around Seoul. Clara remembered not fitting in among Dominican peers because of her language and expressed frustrations when her Korean-identity was overlooked as peers identified her as ‘Chinese.’ She stated that she was relieved when her peers at SMCS began calling her by her name, which is interesting, in that her peers were not using her given Korean name (Chung Cha), but calling her Clara, the name her parents had selected for her when they enrolled her at SMCS as a preschooler and not the name that she uses now that she has returned to South Korea. In her first two years in the Dominican Republic, Eung Jung found refuge in the small South Korean community at SMCS, but by her senior year she said, “I hung out with my Dominican friends a lot.” Following graduation and returning to South Korea with her family, Eung Jung shared that the first year back in South Korea she was “very lonely” for her Dominican friends. While there is an extensive literature around the negotiation of place among transnational youth (Coll & Marks, 2009; Olson, 2008; Pollock & Van Reken, 1999), literature around broader transnational movement beyond the short-term ‘wild goose’ families of South Korea is sparse.

For these two case-study participants, the experience of an alternate, long-term transnational narrative motivated primarily by family social

mobility made feeling at home upon their return to South Korea challenging. Both Eun Jung and Clara struggled to navigate social and cultural norms among their peers, particularly in adapting to the “senior-junior relationship,” where a younger Korean shows respect in language and obedience to elder Koreans (Lim & Giles, 2007). Both described how they missed having close relationships with older peers and teachers, which is typical in the Dominican Republic and difficult to negotiate back in South Korea. “It was hard to adapt to this culture in Korea when I returned because Dominicans do not care about the senior-junior relationship. If they are close in age it doesn’t matter, they can be friends. Koreans just can’t see treating your seniors (elders) as friends,” Eun Jung explained. While Eun Jung in particular described struggling with her Korean academic language upon return because she had studied in English throughout her entire secondary school experience, this need for support from peers became a bridge to developing friendships back in Korea when classmates “helped me when I didn’t know Korean or Korean history or politics.” Eun Jung was able to return this favor of help when it came to her English, because, “I already studied at a higher level in English at SMCS. When Clara, who most overtly described herself, “as a Dominican more than a Korean,” graduated from SMCS she was anxious to experience life in Korea but nervous to learn how to negotiate a place where she didn’t really remember. She felt different than her new classmates at university where, “there are things that a Korean student will never imagine or understand.” Her years in the Dominican Republic, Clara, explained, meant that, “Music and dancing is a part of my everyday life, thinking positively and not worrying about every single thing in life—these are aspects that make me different than most Koreans.”

Eun Jung and Clara constructed a cosmopolitan transnational identity resulting (Collins, 2009; Park & Abelmann, 2004; Turner, 2002). While their case share much in common with cases in the broader transnational literature (Coll & Marks, 2009; Levitt, 2001; Olson, 1998) their narratives contrast with much of the extant literature focused on South Korean families whose migration has been primarily motivated by giving children access to English. While the participants did acquire English and Spanish proficiency while living the Dominican Republic, this was an added benefit above and beyond the primary purpose of their move, which was greater social mobility resulting from career opportunities available through moving to the Dominican Republic. For Eun Jung’s family the did not work out

how the family had planned and they had to “start at the bottom,” when they returned to South Korea. Eun Jung acknowledged that the opportunity she had to study both English and Spanish provided her with opportunities that did include access to a national university upon her return.

While this study illuminates the presence of a transnational student experience not currently represented among the literature regarding South Korea it is limited by its participant pool. More research should be conducted to examine how a prolonged transnational experience motivated by social mobility contributes to the development of a cosmopolitan transnational identity that Beck (2002) would describe as ‘rooted cosmopolitanism,’ enabling participants engaging in transnationalism to have both “roots and wings at the same time,” to have identities that “are ethically and culturally *simultaneously* global and local” (pp. 19, 36) rather than a short-term transnational experience motivated by access to English. Future work could also examine multi-generational transnational families as both Eun Jung and Clara use similar language when they describe desiring a future transnational reality for their children. Despite the acknowledged challenges transnational life, including a complicated sense of home and homesickness, and the personal challenges of being an outsider in either nation, both participants desire their future children to share their transnational identity and experience. Recently, Clara’s Facebook status popped up in my newsfeed. It simply read, “I miss DR.” The first comment in response was from one of Clara’s Dominican classmates, “And I miss you.” Cases like Clara’s and Eun Jung’s serve as a reminder to broaden the scope of inquiry in order to truly understand the nuances and complexities inherent in the transnational experience and identify.

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Transitional Adjustment Intervention for International Students in U.S. Colleges

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Abstract

As international students make up an increasing body of students on U.S. college campuses, how to effectively assist their transition becomes an emerging task for staff in this educational setting. This intervention is designed to inform educational administrators as a protocol to help international students transition to U.S. college campuses. The intervention aims to target international students' psychological adaptation by addressing social support and adaptive emotion regulation through increasing social self-efficacy, level of assertiveness and mindfulness. Proposed interventions include peer mentoring, assertiveness training and mindfulness exercises. Details on implementation and evaluation of this program are provided. The intervention proposed incorporates the social support as well as emotion-focused coping component, which has not been proposed nor tested in the literature.

Keywords: international students, acculturation, perceived social support, social self-efficacy, mindfulness

As the number of international students is increasing on U.S. college campuses, how to work with and assist this population effectively has become more important for educators, especially during the transition period. In light of this phenomenon, considerable research has been conducted on factors which influence acculturation and adjustment among international students in the U.S. (Smith & Khawaja, 2011). However, little is known about effective interventions regarding this concern. Thus, this intervention is proposed to inform educators about how to assist international students based on theoretical and empirical findings related to their transitional adjustment process. Core psychological concepts are reviewed and targeted interventions with detailed descriptions are proposed. In addition, how the interventions work to achieve the goal and evaluation are discussed thereafter.

Introduction

According to *Open Doors* (Institute of International Education, 2015), 974,926 international students studied during the 2014-2015 academic year in U.S. colleges and universities. This number has grown steadily in the past few decades. However, the cultural exploration journey usually accompanies with excitements as well as challenges. While excited about the new environment, international students also face the difficulties resulted from unfamiliarity with the new education system and social norms, and most likely from limited language proficiency. In addition, unlike immigrants, international students typically settle in the host country by themselves without social networks and resources that they used to have in their home countries. The difficulties may be attenuated by contextual factors like discrimination and result in homesickness and social isolation (Akhtar, 2011; Sandhu & Asrabadi, 1994; Wedding, McCartney & Currey 2009).

The accumulation of challenges could result in *acculturative stress*, which is individuals' psychological and physiological adaptation in reaction to the new culture (Berry, 2005) and highly associated with mental health concerns for international students (Constantine, Okazaki, & Utsey, 2004; Misra, Crist, & Burant, 2003; Wei et al., 2007; Wilton & Constantine, 2003). A variety of factors have been examined contributing to acculturative stress. Perceived social support, defined as perceptions of

available psychological and material resources when needed to cope with stress, is one of the most important factors (Meng, Huang, Hou and Fan, 2014; Misra et al., 2003; Yeh & Inose, 2003). Social support is identified as a variable in several acculturation models (e.g. Arends-Toth & van de Vijver, 2006; Berry, 2006; Ward, Bochner & Furnham, 2001) that can decrease acculturative stress and assist adaptation. Partially due to limited language proficiency, lacking social support and social connectedness can cast a negative impact on international students' psychological well-being (Yeh & Inose, 2003). Indirect evidence on the moderation effect of social support between acculturative stress and mental health symptoms asserts the potential effectiveness of broadening international students' social network and support in the new environment on alleviating acculturative stress (Smith & Khawaja, 2011). Relevant behavioral interventions involving pairing international students with domestic students have shown evidence to enhance social support and other positive influences (Smith & Khawaja, 2011).

In Mallinckrodt (2000) interpersonal process model, social self-efficacy is related to perceived social support as a part of social competencies. Generated from Bandura's theory of self-efficacy, Smith and Betz (2000) defined social self-efficacy as "an individual's confidence in her/his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships" (Lin, 2006, pp.4-5). Also, higher social self-efficacy is associated with more assertive behaviors in a new social environment (Smith & Betz, 2000). However, international students exhibit lower social self-efficacy and lack the necessary assertiveness skills desired in American culture to build connections in the new environment (Lin, 2006; Tavakoli, Lumley, Hijazi, Slavin-Spenny, & Parris, 2009). Tavakoli et al. (2009) developed an assertiveness training specifically targeting international students and has shown positive results in alleviating acculturative stress.

In Smith and Khawaja (2011), future interventions for international students can address more on social support and effective coping skills. The importance of coping strategies is addressed by Khawaja and Dempsey (2007, 2008), as they found that, while the level of psychological distress is similar between international and domestic students, the coping strategies make differences. International students tend to apply maladaptive coping strategies (including denial, self-blame, venting, behavioral disengagement and substance use) when psychological distress

presented comparing to the domestic students (Khawaja & Dempsey, 2007, 2008). Even though the research on adaptive coping strategies adopted by international students are limited, some has shown that acceptance and self-compassion have positive effect on acculturative stress (Lin & Betz, 2009, as cited in Smith & Khawaja, 2011). Mindfulness, is a concept closely related to acceptance and self-compassion, involving an attitude of openness, curiosity and acceptance in the present moment with intentional regulation of attention (Hayes & Feldman, 2004). Mindfulness varied in forms from Yoga and meditation, to walking and eating, which can be easily learned and incorporated in daily life with fewer stigmas. Thus, mindfulness can be viewed as a less stigmatized alternative to equip international students with effective emotion-coping skills other than formal counseling services, which the international population tends to underutilize.

Limited empirically tested interventions for international students' adjustment are available. Interventions have been developed focusing on practical and academic matters from a behavioral approach, like Excellence in Experiential Learning and Leadership (Mak, Westwood, Barker, & Ishiyama, 1999, as cited in Smith & Khawaja, 2011) and cross-cultural relationship bonding (Abe, Talbot, & Geelhoed, 1998; Shigaki & Smith, 1997, as cited in Smith & Khawaja, 2011). Even some positive effect of these interventions were found, those directly addressing psychological adaptation through social support and coping strategies are still in need (Smith & Khawaja, 2011). In light of what was mentioned above, the objectives of this intervention include: 1) overcoming communication barriers through increasing international students' assertiveness, 2) increasing international students' perceived social support and social self-efficacy through peer mentoring, and 3) teaching international students mindfulness exercises as resources and skills to cope with emotions.

Method

Participants

Students whose first language are not English but have adequate level of English proficiency for admission to the university can be recruited to the program. Both undergraduate and graduate students can be included.

Demographic information of international students needs to be collected, including gender, age, education (undergraduate, master's or doctoral students), marital status, country of origin and length of stay in the host country.

Procedure

Recruitment and consent. The program will be advocated as a program in assisting international students' transition and success in the U.S. colleges. Recruitment will occur at the beginning of Fall and Spring semester through orientation events for international students and International Student Office. Participants will sign the consent forms approved by institutional review board and complete the demographic questionnaire as well as the baseline of outcome measures. When the interventions are completed by the end of the semester, the outcome measures will be provided again for the participants to complete.

Peer Mentoring. Laughrin (1999) found that, when facing stressful situations, a personally known (low authority figure) and cultural helper is perceived to be most helpful. Pairing up international students with domestic students has shown to facilitate social adjustment, social support, increased utilization of university services and academic performance (Smith & Khawaja, 2011). In this intervention, both domestic and international upperclassmen who are interested in pairing up with incoming international students will be recruited for the proposed study. The peer mentor relationship lasts for a whole semester. The peer mentor is supposed to hold accepting and helping attitude rather than being culturally insensitive. Peer mentors also serve a role as cultural consultants for international students on how the interpersonal exchanges and other cultural rules work in the American culture. Through Peer Mentoring, the freshmen will be able to foster interpersonal networks and learn about the host culture faster in the new environment. The peer mentor will be assisting incoming international students in locating campus and community resources according to their needs. Especially at the beginning of the school year, this would be tremendously helpful for incoming international students. Upperclassmen who are also international students will also share their experiences on both challenges and excitement of their journey in the U.S. It is expected that international students would get experiences in

forming interpersonal relationship in the new environment, getting familiar with resources on campus, learning personal experiences from other peers, and perceiving more social support after paired with a mentor.

Assertiveness Trainings. According to Tavakoli et al. (2009), appropriate communication in the U.S. context is an important concern of international students. Assertiveness training in a group format is shown to have a positive effect on emotional adjustment (Tavakoli et al., 2009). Based on the research findings of Tavakoli et al. (2009), the training sessions will provide international students culturally sensitive materials on assertive communication in daily interpersonal exchanges bi-weekly. Scenarios includes setting appropriate boundary, knowing the boundary of self-disclosure and express personal ideas properly. The training also emphasize practice inside (e.g. role play) and outside the classroom and assist students with feedback. A peer mentor would be a good partner to practice with at the beginning. Level of assertiveness will be assessed so that researchers can explore whether increased level of assertiveness is associated with other outcome variables.

Mindfulness Exercises. Among existed programs, no empirical evidence has shown to effectively address the emotional distress and psychological adjustment among international students (Smith & Khawaja, 2011). The current proposal draws on the research evidence that mindfulness meditation helps facilitate emotion regulation process (Chambers, Gullone & Allen, 2009; Kabat-Zinn, 1994). Mindfulness-Based Stress Reduction program, for example, has shown to be effective on a range of clinical and stressed non-clinical populations with medical or psychological symptoms, which are also among international students who experience acculturative stress (Grossman, Niemann, Schmidt, & Walach, 2004; Nyklíček, & Kuijpers, 2008). Specifically, level of mindfulness has been shown to have an effect on mood and perceived stress as well as to predict academic performance among college students (Caldwell, Harrison, Adams, Quin, & Greeson, 2010; Shao & Skarlicki, 2009). Further, international students who present more acceptance and self-compassion reported less acculturative stress or less depressive symptoms (Lin & Betz, 2009, as cited in Smith & Khawaja, 2011). International students will be invited to join psychoeducation groups to learn and practice mindfulness. The mindfulness group needs to be advocated

in a way less stigmatized to the participants and lasts for eight weeks. During each week, a mindfulness-related topic will be discussed in the context of life experiences in the new environment. Topics include basic concepts of mindfulness, understanding acceptance; practicing informal exercises like mindful walking and mindful eating as group activities; raising awareness of inner critic and common humanities (e.g., we all experience up-and-downs); practicing defusion exercises like Leaves on a Stream (a defusion exercise involves observing and visualizing internal thoughts and feelings without judgements). International students will be encouraged to practice outside the group by raising inner awareness of the present moment, observing non-judgmentally, and gaining a sense of acceptance in their life. Participants will be invited to share their reflections on how they apply the techniques in daily life and supported without judgement.

Measures

Scale of Perceived Social Self-Efficacy (PSSE, Smith & Betz, 2000) will be used to measure social self-efficacy in this program. PSSE consists of 25 items using a 5-point Likert scale measuring the level of confidence in a range of social situations, ranging from 1 (*no confidence at all*) to 5 (*complete confidence*). Smith & Betz (2000) found high internal consistency reliability (Cronbach alpha = .94) and good test-retest reliability results ($r=0.82$ with a three-week interval). Social self-efficacy also showed strong construct and discriminant validity.

In addition, emotion regulation is measured by Difficulty in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). Six dimensions of emotion regulation were assessed including lack of awareness, clarity and acceptance of emotional responses, limited emotion regulation strategy repertoire, and difficulties controlling impulses and engaging in goal-directed behavior when negative emotions emerge (Gratz & Roemer, 2004). High internal consistency was reported by Cronbach's alpha ($\alpha = .93$). Item-to-total correlations ranged from $r = .16$ to $r = .69$ (Gratz & Roemer, 2004). Good construct validity and predictive validity were also reported (Gratz & Roemer, 2004).

The Rathus Assertiveness Schedule (Rathus, 1973) will be used to measure change in assertiveness level. This 30-item schedule measures how individuals present themselves in specific situations when assertive

behavior could benefit them. The schedule has moderate to high test-retest reliability ($r = .78$; $p < .01$) and good validity (Rathus, 1973).

Social Support Questionnaire Short Form-Revised (SSQSR, Sarason, Sarason, Shearin & Pierce, 1987) is a 12 item, 6-point Likert scale. It measures the perceived network and satisfaction in social support. The network subscale assesses how many people the reporter could gain help from and the satisfaction subscale measures the satisfaction regarding the social support received.

Also, the purpose of the program is to help international students with acculturative stress and thus Acculturative Stress Scale for International Students (ASSIS, Sandhu & Asrabadi, 1998) will be applied to examine the overall effectiveness of this intervention. ASSIS was designed to measure perceived acculturative stress of international students using a 36-item 7-point Likert scale. The scale consists of seven subscales including Perceived discrimination, Homesickness, Perceived hate, Fear, Stress due to change, Guilt and Miscellaneous (Sandhu & Asrabadi, 1998).

Design and Analysis

Participants in the program will be randomly assigned to the control group (waiting list) and experiment group. The control group will be given the program in the following semester after the study begins. Descriptive statistics and F statistic will be conducted to compare demographic information. It is expected that there are no significant differences in the two groups at the baseline.

Only participants who complete the whole program will be included in the data analysis. Attrition and adherence analysis should be provided. To test the first hypothesis, one factor ANOVA analysis should be applied to compare the differences in changes in acculturative stress/perceived social support in two groups. It is expected that the differences in changes in acculturative stress/perceived social support between the two groups will be statistically significant. The decrease in acculturative stress for participants in the experiment group is expected to be greater than for participants in the control group and the increase in perceived social support for participants in the experiment group is also expected to be significantly more comparing to the control group. Further, to test the second hypothesis, the relationship between increased social self-efficacy/level of assertiveness/adaptive emotion regulation and acculturative stress/perceived

social support in the experiment group should be explored separately. It is expected that social self-efficacy/assertiveness level and adaptive emotion regulation will be positively associated with perceived social support and negatively associated with acculturative stress.

Conclusion

As international students become more and more visible on college campuses in the United States, concerns related to international students' cross-cultural adjustment process personally and academically grasp educators' attention. International students have been reported to underutilize counseling services on campus and therefore an alternative format of intervention is needed (Smith & Khawaja, 2011). Earlier programs designed for international students have focused on important skills in the new environment through workshops (Mak, Westwood, Barker, & Ishiyama, 1999, as cited in Smith & Khawaja, 2011) or supporting group environment (Carr, Miki Koyama and Thiagarajan, 2003). Differentiating from former programs, the current program especially addresses socio-emotional adjustment of international students by facilitating building social support and coping strategies, especially emotional adaptive strategies. This current study proposes mindfulness as an intervention targeting the emotion regulation process, which has not been emphasized in the existed programs for international students, but has shown to be very helpful for many populations. Even though the intervention components are proposed based on evidence, cautious decisions should be made regarding the effectiveness of this program. Program evaluation should be conducted in the future based on the information provided in this article.

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Language, Literacy, and Dewey: “Experience” in the Language Arts Context

Jessica Masterson

Abstract

Blending the Deweyan idea of “experience” with the work of contemporary literacy pedagogues and classroom examples, this paper explores the implications of Dewey’s principles upon today’s classroom contexts. If experience is a central component to education, how might Dewey’s ideas help to re-focus our scattered perceptions of what literacy learning “ought” to be in the 21st century? Furthermore, what possibilities are created therein for language arts teachers and students?

Introduction

In *School and Society* (1990), John Dewey once advised, “Relate the school to life, and all studies are of necessity correlated” (p. 91). Though simply stated, this 100-year-old ideal is still elusive in public education. Amid the turmoil and uncertainty bred by political initiatives in public education over the past few decades, discussions concerning the philosophical foundations of education are all the more pertinent. Though

initiatives like the No Child Left Behind Act of 2001 and the Race to the Top program introduced in 2009 have secured and even expanded the prominence of language arts education in public schools, these and other pieces of legislation have also narrowed the curricular possibilities of this discipline, effectively moving farther away from the close relationship between life and school as envisioned by Dewey (e.g., Kuhn, 2014; Ravitch, 2011; Spring, 2014).

Thus, as English teachers in the United States scramble to keep pace with new waves of education legislation as they replace older ones, it seems an appropriate time to reflect upon lessons of the past, with the ultimate intent of shining a critical light upon the future of public education. The work of John Dewey, which spans the fields of philosophy, psychology, and education reform, offers an intriguing, multifaceted conceptualization of progressive education. Though not known specifically for his ideas about literacy-learning per se, many of his larger philosophical points are instructive for the language arts classroom, and are thus deserving of our attention at this political moment. As such, how might Dewey's ideas – particularly those concerning experience – help to re-focus our scattered perceptions of what literacy learning “ought” to be in the 21st century? What are some of the implications of these ideas – and what possibilities do they create – for language arts teachers and students? With full knowledge that “A question well put is half answered” (Dewey, 2011, p. 85), I offer the aforementioned questions as launching pads from which deeper issues may be explored.

“Educative” Experiences, Continuity, and Literacy Education

Before exploring Dewey's ideas, I want to first provide an example from the realm of language arts for the purposes of connecting Dewey's vision to everyday pedagogical practices.

At the start of a high school English class, students are given a copy of the poem, “The Boy Died in My Alley,” by Gwendolyn Brooks (n.d.; see Appendix A). The teacher has selected this poem in the wake of a spate of violent acts across the nation. The students read the poem to themselves over a few times, and are then asked to write a Creative Response (Kirby & Crovitz, 2013) about it in any form they choose – a poem, a drawing, a narrative, etc. After the students write, they switch papers with one

another and provide written responses to each other's initial writings, offering questions, suggestions, or affirmations in a "silent conversation." After a brief discussion about the evocative imagery in the poem and the mood and tone they establish, the teacher poses a question for group discussion: "What can this poem teach us about life?" The conversation is lively and emotional, and is enriched by a seamless interweaving of recent events in the country their connection to the school's community, and the powerful, haunting words of the poem. Near the end of class, the teacher poses another question, "In thinking about our experiences and knowledge as citizens of this community and as students of English, what action can we take?" After some discussion, students decide to write poems about times in their life in which they've been complicit in acts of wrongdoing (a la Brooks' poem), to be compiled and disseminated at community centers in the area.

Experience and Continuity

This example, while not meant to be an exemplar, is offered as a starting point from which we might think about the importance of experience in the lives of our students, and thus, its importance within the English curriculum. A continued refrain among many of Dewey's works is the immense importance of experience. The incorporation of the student's past experience, he notes, is critical to the success (or failure) of any educational program, and as a result, it deserves exploration for the purposes of this paper. A chief component of experience according to Dewey is that of continuity, or a sustained, meaningful connection among educational experiences; a veritable thread that connects one day's learning to yesterday's, as well as tomorrow's. While educational experiences ought to provide the impetus for future learning, Dewey (1997) notes that continuity of experience "applies in some way in every case, the quality of the present experience influences the *way* in which the principle applies" (p. 37). At its core, continuity rests upon the habits and dispositions of students, with special attention given to the myriad ways in which these habits are influenced by the past and, in their repetition, shape the direction of future experience:

[The fact of habit] covers the formation of attitudes, attitudes that are emotional and intellectual; it covers our basic sensitivities and ways of meeting and responding to all the conditions

which we meet in living. From this point of view, the principle of continuity of experience means that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after. (1997, p. 35)

If we accept that the principle of continuity plays a critical role in determining the quality of future experiences, it follows that some degree of discernment among different sorts of experience is needed. Thus, Dewey's formulations of "educative" and "mis-educative" experiences are intended to distinguish among those experiences that on the one hand, contribute to the growth of the individual, and on the other, those that slow growth or stunt it entirely. "Growth," of course, is its own heavy concept perhaps worthy of its own exploration, though Dewey (1997) pithily suggests that its presence is evident "when and only when development in a particular line conduces to continuing growth" (p. 36). Educative experiences, or those that promote continuing growth, are useful to broader discussions of curriculum and pedagogy across content areas; while mis-educative experiences promote "the effect of arresting or distorting the growth of further experience," educative experiences are ones that impel within the student a desire for further learning (p. 25).

For example, a colleague I knew sought to enliven vocabulary instruction (itself an often mis-educative endeavor when removed from any context) by re-branding it as a game he called "Pimp My Word," based on the then-popular MTV show, "Pimp My Ride." In the lessons I observed, though students were excited by the novelty of this exercise (as any occasion to use the term "pimp" in an apparently school-sanctioned way is a thrill), it seemed that students were more entertained by the premise of this activity than anything else, and I wondered whether students, based upon this experience, would be continually motivated to build their vocabulary as a result. Dewey (1997) accounts for this in noting that "experiences may be so disconnected from one another that, while each is agreeable or even exciting in itself, they are not linked cumulatively to one another" (p. 26). Without this crucial linkage, experiences fall into the realm of the mis-educative.

Many of Dewey's views on experience are echoed, in some ways, in Kirby's and Crovitz's (2013) descriptions of textual transaction:

Not only does someone read a novel, but the theme and characters from the novel are so compelling that the reader also alters

her point of view, thinking, or perception... Transactions with texts are perhaps the ultimate learning achievement: What we learn changes what we do, how we think, perceptions of ourselves or others, and insights about our own or another culture. (p. 251)

This idea of experience — here in the form of transaction — as something that expands our views and contributes to further growth would likely qualify as an educative experience in Dewey's view. In the aforementioned example, students are asked to transact with Brooks' poem in a way that connects and expands upon their lived experiences and propels further growth.

Experience and Environment

A final criterion of Deweyan experience concerns the social and physical environment in which learning is to take place. As he explains,

A primary responsibility of educators is that they not only be aware of the general principle of the shaping of actual experience by environing conditions, but that they also recognize in the concrete what surroundings are conducive to having experiences that lead to growth. (1997, p. 40)

The role of the teacher, then, is not one of authoritarian control, nor is it one of laissez faire indifference; instead, the teacher serves as the principal *curator* of educative, continuous experiences that attend to and make use of carefully-considered objective conditions.

As such, what sorts of environing conditions and surroundings are best suited for literacy learning as a Deweyan experience? Given the central importance of growth - aided by experience and interaction - in a student's education, which aspects of English education can be adapted to this end? In the example of the English lesson centered around the Gwendolyn Brooks poem, the teacher recognized not only the probable impact of recent events upon her students and how the events, as environing conditions in their own right, were likely contributing to the shaping of her students' experiences, but she was also cognizant of intentionally creating a few conditions within her classroom environment — the careful selection of the poem, the gradual transition from personal reflection to group discussion — in order that these experiences be educative ones. As

the importance of experience cannot be readily overestimated in Dewey's educational equation, literacy pedagogue George Hillocks, Jr. (1995) promotes the careful orchestration and implementation of "gateway activities" meant to "open up new journeys" and generate educative excitement among students (p. 149). More than simply "fun" projects that distract from the overall purpose of the lesson, gateway activities are necessarily bound to the educational objective at hand; in short, they are spaces in which pedagogical theories of literacy and its everyday practice merge:

Theories of discourse, inquiry, learning, and teaching are useless if we cannot invent the activities that will engage our students in using, and therefore learning, the strategies essential to certain writing tasks...Because writing involves both substantive and affective purposes, our activities will have to involve students in appropriate strategies of inquiry. (p. 149)

These ideas are not perfectly Deweyan, of course: While Hillocks calls for the "invention" of activities, Dewey may likely contend that the material and social conditions of real life offer abundant sources of authentic, educative activities, such that any "invention" is often unnecessary. Further, while Hillocks seems to suggest that inquiry is the ultimate end for students' writing, Dewey might position inquiry as something of a tool whose utilization ultimately proffers a deeper understanding of lived experiences. Still, in describing the purpose of inquiry in *How We Think* (2011), Dewey explicitly links intellectual education to the cultivation of inquiry:

No matter how much an individual knows as a matter of hearsay and information, if he has not attitudes and habits of [of inquiry and reasoning], he is not intellectually educated... And since these habits are not a gift of nature (no matter how strong the aptitude for acquiring them); since, moreover, the casual circumstances of the natural and social environment are not enough to compel their acquisition, the main office of education is to supply conditions that make for their cultivation. (p. 26)

Though Hillocks' and Dewey's ideas about experience in education are not perfectly aligned, both acknowledge the chief importance of inquiry in any educational endeavor. Moreover, though Hillocks seeks to "invent" activities rather than cull them from everyday life, Hillocks' conception of

teaching writing strives to engage students in writing processes and products that are reflective of real-world literary production, and not merely responsive to the literacy demands of high-stakes tests. The teaching example provided earlier was chosen because it anticipates a shared difficulty - perhaps a collective need to mourn and seek closure - among students in the wake of a tragedy. The teacher, anticipating the emotions of her students (as well as her own emotional needs), adapted the environment to address these aims, all while incorporating the various tools of literacy: reading, writing, analyzing, speaking, and listening.

In sum, literacy learning - and the educative, continuous experiences we design to this end - should be fully in step with the social, economic, and historical reality of students' everyday lives, a point which Dewey (1990) vigorously makes in *School and Society*, as elsewhere. But to what end? Although the authors discussed here more or less agree upon the importance of experience in education, what are the ultimate goals of such work? While for Kinloch (2010) and Freire (2000) experience is focused around the pursuit of social justice, Hillocks (1995) and Dewey (1938) believe the value of an experience is best determined by its utility and application to future experiences. These ends are not mutually exclusive, of course. Indeed, Dewey's focus upon the necessity of the future application of experience, if fully realized, would very likely contribute not only to an individual's growth, but also to the overall improvement of society. Says Hillocks (1995):

In a sense that is what real teaching is all about, helping students learn to enjoy the process of thinking through complex problems because that gives them the power and the confidence to undertake new problems in new situations without the structure of the classroom environment. (p. 75)

Compare Hillocks' emphasis on ensuring students possess "the power and the confidence to undertake new problems in future situations" with Dewey's (1997) attention to the importance of extracting meaning from future experiences:

What avail is it to win prescribed amounts of information about geography and history, to win ability to read and write, if in the process the individual loses his own soul: loses his appreciation of things worth while, of the values to which these things are relative; if he loses desire to apply what he has learned and, above

all, loses the ability to extract meaning from his future experiences as they occur? (p. 49)

While Hillocks is more concerned with thinking as it impacts future decisions and problems, Dewey links a “soul”-ful education to one that is also tied to future application, but “above all” allows individuals to draw meaning from experiences as they happen. Still, both Dewey and Hillocks lay out the value of education in terms of its capacity for use in future situations. Once more, these constructs incite us to wonder about the kinds of values we are cultivating at present in our literacy practices, whether a typical student in today’s English classroom feels a desire to apply their skills to different contexts, and what, if anything, is “taken up” by our pupils. Thus, in addition to considering the role of environment and continuity in shaping educative experiences, we must also contend with the question of the student, and more specifically, the extent to which they are actively involved in the task at hand.

Experience and Occupation

To this point, Dewey may well contend that the degree to which a student constructs meaning of his or her experiences is directly correlated to the amount of time the student was actively occupied in such experiences. In *Democracy and Education* (2012), Dewey writes, “Occupation is a concrete term for continuity” (p. 331). In addition to supplying the child with a “genuine motive” for learning, Dewey (1990) also argues that occupation engages learners in the raw material of social and historical values and scientific advancements. Much of what Dewey has to say about occupation involves a key connection between mind and body, such that suggestions of kinesthetic experiences are often woven into his examples. Though not a total facsimile for the “close and intimate acquaintance got with nature at first hand, with real things and materials, with the actual processes of their manipulation” demanded by Dewey (1990, p. 11), Kinloch’s (2010) re-formulation of 21st century literacies to include “the multimodal, multisensory, print, visual, linguistic, and cultural practices that youth and adults employ and are confronted with on a daily basis” (p. 118) invokes Bakhtin’s (1981) recognition of multivoicedness, or the acknowledgement of the interrelation between past, present, and future in literate acts. Indeed, the dialogical encounters in which Kinloch seeks to engage her students require an understanding of the present that extends beyond “a

sharp, narrow knife-blade in time” to simultaneously include “a pressure forward, a glance backward, and a look outward” (Dewey, 2002, p. 281).

Educative experience, as a harmonious interplay of continuity, environment, and occupation, is not only possible in a 21st century language arts context, it is vitally necessary. As the linkages between everyday life and the increasingly turgid curricular requirements of schooling grow weaker, students’ experiences in language arts are less likely to build upon “felt difficulties” (be they emotional and/or intellectual) and more likely to be subject to the alternating winds of education reform. But where there are challenges, there are also possibilities. Thus, where the previous section explored Dewey’s notion of experience, the second half of this paper seeks to reframe our thinking around a new path for literacy education that is grounded in everyday realities, but simultaneously strives toward Deweyan ideals.

Deweyan Possibilities for Literacy Education in the 21st Century

In practice, progressive literacy educators such as Kinloch and Hillocks demonstrate that the fusion of culturally responsive, multimodal literacies and English can be effectively utilized to enliven language arts instruction through experience and continuity. Up until this point, Dewey’s writings about continuity, experience, and occupation have been extrapolated to suit the general context of literacy learning at present. However, a difficulty emerges in seeking to rectify Dewey’s ideas about literacy with the restrictive, or perhaps *prescriptive*, requirements many of today’s teachers face. In the spirit of Foucault’s (1984) notion of critique as an engagement with history that allows us to transcend its imposed limits, let us examine some of these historical limitations as well as a few Deweyan possibilities for literacy.

Dewey expresses necessarily complex views about the act of reading, as well as ideal purposes for different sorts of texts. In the case of informational texts, for instance, Dewey believes students are best served by them as they seek to extract additional meaning from their lived experiences. “Harmful as a substitute for experience,” he writes in *The School and Society*, “[the book] is all important in interpreting and expanding experience” (1990, p. 85). Following from this, the library or recitation

room is not so much to be viewed as a place in which experience is meant to occur; rather, it is a place for students to bring their experiences, problems, and questions in order for new light to be shed upon them. In the absence of a motivating experience that propels a student to pick up a book, warns Dewey (1990),

the child approaches the book without intellectual hunger, without alertness, without a questioning attitude, and the result is one so deplorably common: such abject dependence upon books as weakens and cripples vigor of thought and inquiry, combined with reading for mere random stimulation of fancy, emotional indulgence, and flight from the world of reality into a make-believe land. (p. 112)

While this passage seems almost dismissive of the value of fiction, Dewey's (2005) statements about literature in *Art as Experience* paint a more nuanced picture of his views. Here, he defines experience as "the result, the sign, the reward of that interaction of organism and environment which, when it is carried to the full, is a transformation of interaction into participation and communication" (p. 17). Defined in this way, and as the title of the text suggests, works of art, including literature, are experiences unto themselves. Undoubtedly, Dewey speaks quite fondly of literature throughout this text, noting that because of the sociohistorical and symbolic weight carried by words - both written and spoken - "its material thus has an intellectual force superior to that of any other art, while it equals the capacity of architecture to present the values of collective life" (p. 249). In addition, Dewey points to the power of continuity - and the dynamic experiences it engenders - present within literature by virtue of the art form's unique reliance upon language:

[C]ontinuity is not confined to letters in its written and printed form. The grandam¹ telling stories of 'once upon a time' to children at her knee passes on and colors the past; she prepares material for literature and may be herself an artist. The capacity of sounds to preserve and report the values of all the varied experiences of the past, and to follow with accuracy every changing shade of feeling and idea, confers upon their combinations and

1. Archaic term for *grandmother*

permutations the power to create a new experience, oftentimes an experience more poignantly felt than that which comes from themselves. (p. 250)

Here, Dewey recognizes the potency of language and literature in creating new experiences, a nuance that appears to be overlooked in his earlier work. To wit, the ability of oral literacy ("sounds," as he describes them) to convey not only the experiences of past people and events but also to evolve, in response to present circumstances and attitudes, into something else entirely is unique among the various art forms he discusses, and provides a strong argument for the promotion of literacy - in its most comprehensive sense - as a means of achieving such transformative experiences. We might look to literature as a viable way of exploring and engaging a diversity of experiences and questions of which, bound as we are to our singular lifetimes, we otherwise would have no knowledge. Booth (1988) suggests that these "tryings-out" via narratives

offer both a relative freedom from consequence and, in their sheer multiplicity, a rich supply of antidotes. In a month of reading, I can try out more 'lives' than I can test in a lifetime. (p. 485)

Though Dewey might counter such a claim with a reminder of the importance of quality over quantity with regard to experience, books *do* allow us vital windows into the innumerable ways of being in the world, and as such, they cannot be overlooked as potential sources for educative experiences.

While Dewey assigns different purposes for different sorts of texts, he nonetheless believes in the immense value of various forms of literacy to experience. However, the trend of contemporary education policy in language arts seems to be taking an altogether different tack. Though many recent education reforms, including the near-ubiquitous implementation of the Common Core State Standards and the passage of the Every Student Succeeds Act in 2015, have been rolled out in recent years, standardized tests persist. In the field of language arts, a renewed focus on STEM (Science, Technology, Engineering and Math) education has given rise to an explicit reduction in the number of fiction and literary texts students read from kindergarten through 12th grade, and a marked increase of exposure to informational texts. The Common Core State Standards, still widely utilized, dictate that by the end of high school, 80% of the literacy

curriculum is to be devoted to informational texts (www.corestandards.org). Though perhaps Dewey would be in favor of such a curricular emphasis upon informational texts if each text was sufficiently preceded by a relevant, motivational experience that sent children running to the library, hungry for more information with which to interpret and/or expand upon that experience, the reality seems to be just the opposite. That is, while informational texts are accounting for more and more space in the English curriculum, the general compartmentalization of content areas remains intact, such that there is little to no continuity between the experiences gleaned in, say, social studies, and the informational texts students read in English. It is troubling, then, to witness the effective crowding-out of literature and all of its attending aesthetic possibilities for experience.²

In stark contrast to the unity and continuity promoted as the antidote to “traditional education,” Dewey highlights the disconnection between our ideals and our actions in American society. While known around the world for our idealism, in practice, materialism is *de rigueur*.

“We live as if economic forces determined the growth and decay of institutions and settled the faith of individuals” says Dewey (1999), “Liberty becomes a well-nigh obsolete term; we start, go, and stop at the signal of a vast industrial machine” (p. 6). Though Dewey’s approach stresses connections across content areas, grade levels, and tasks, most public school organizational systems still take most of their cues from an industrial model of education that even pre-dated Dewey. Subject areas are taught in turn, rather than concurrently, and students still enter the school system in batches “as if the most important thing about them was their date of manufacture” (Robinson, 2010). If we accept that the teaching example presented in an earlier section, itself based upon the ideas of Dewey, Kinloch, and Hillocks, serves as an ideal model of an educative literacy experience in which continuity, environment, and occupation work together to produce growth, to what extent is this ideal a reasonable possibility, given the highly departmentalized, highly isolated nature of school systems today?

For Demetrian (2002), Dewey’s pragmatism may in fact represent the *best* option for contemporary literacy education. When seen as a “symbolic midway point between structural-functional views of literacy linked

2. Brandt’s (2001) framework of “literacy sponsorship” asks us to question the motives of the political actors who underwrite and/or produce curricular and pedagogical materials for literacy education.

to the stabilization of the status quo and more radical Freirian variants that seek substantial transformation of the social order,” Dewey’s conceptualizations of experience and growth, the latter being the ultimate goal of education, are particularly suited to current progressive aims for literacy (p. 34). Noting that literacy is, in part, an assimilative process, Demetrian believes that Dewey strikes the correct balance between working to humanize existing institutions and systems both from within and from without. In this analysis, Dewey’s pragmatism is most appropriately understood as “a form of meliorism or gradualism moving from the given to what is possible to construct” given the historical context (pp. 53-54). Demetrian writes from the vantage point of an adult literacy educator, and thus, “felt difficulties” of many sorts provide the spark that ultimately propels his students to sign up for literacy courses. He has witnessed firsthand the ways in which literacy attainment has paved the way for his students to “progressively realize present possibilities...and thus make individuals better fitted to cope with later requirements” (Demetrian, 2012, p. 62). A few reflections from one of Demetrian’s students beautifully illustrate the connection between literacy and the Deweyan ideas of growth, experience, and continuity:

I see now that even though I thought all I wanted for myself was reading and writing, I wanted more than that. A lot of doors opened. When you keep feeding the brain with new ideas, knowledge about reading and writing, and other learning skills, other doors open. (p. 48)

Though this student initially viewed literacy as an end, in the process he came to view literacy as a means to exploring various other “doors” that now lay before him.

O’Leary (2005), in comparing Dewey’s notion of experience with that of Foucault’s, emphasizes the “intimate” ways in which aesthetic experiences, and specifically, experiences with literature, might expand our view of the world. Dewey (and Foucault) both grapple with the necessity of interaction to experience. The necessity of interaction between the creator and the consumer is summed up in Dewey’s (2005) observation that “a new poem is created by everyone who reads poetically” (p. 106). Despite the radical differences in some of the two theorists’ ideas, O’Leary (2005) concludes that both agree upon the profound effects of the aesthetic experience in literature, if only as they impact the reader:

for the reader who is active in the doing and undergoing of the poem, a change becomes possible; a change in the way he or she experiences the world, and a change in the way he or she experiences his or her own past - and future. (p. 555)

Conclusion: Conceptualizing the Way Forward

Our task as 21st century literacy educators, though far from clear, is given some direction by Dewey's notions of experience and art. Perhaps we might shift from our everyday focus on "what" to teach to a more nuanced examination of "how" to teach, especially in such a way that we might assist our students in thinking "poetically." The environment we craft must be conducive to such thinking, of course. We must also work to select evocative texts that will occupy our students as fully as possible, as Dewey (2005) insists, "it cannot be asserted too strongly that what is not immediate is not esthetic [*sic*]" (p. 106). Further, while Demetrios's adult literacy students have experienced firsthand the difficulties of moving through the world without the cultural capital yielded by print literacy, we might do well to interrogate the particular kinds of "felt difficulties" to which the study of literature is especially well-suited to respond, as in the case of the English lesson that thoughtfully employs a powerful poem to evoke a "truth" that, say, a newspaper report about the same event could not.³ We must strive to find new ways of expanding our students' view of themselves and the world, and the aesthetic experience that literature and other art forms arouse is perhaps our most important asset to this end. Dewey (2005) reminds us that "the work of art is complete only as it works in the experience of others than the one who created it" (p. 106); similarly, our charge as literacy educators is to cultivate experiences that continue to "work" in the lives of our students long after they've left our classroom. For as Dewey (2007) writes in *Experience and Education*, "the most important attitude that can be formed is that of desire to go on learning" (p. 48). If we accept this statement as truth, we can begin to design educative literacy experiences to this end. Indeed, in

3. I am here calling attention specifically to Nussbaum's (1990) assertion that "certain truths about human life can only be fittingly and accurately stated in the language and forms characteristic of the narrative artist" (p. 5).

the tumultuous political and social climate of today, our students demand from us a space in which to make sense of our shared and differing experiences as school, community, and global citizens. Unfortunately, there are fewer and fewer of these spaces in public education today, and the language arts context remains one of these rare sites. Though in a sense this article contributes to a century-long conversation regarding how best to implement Deweyan principles in education, in another sense it is a call to action; because the concepts of experience, continuity, and occupation are as critical to our students' growth today as they have ever been, we must work creatively and flexibly to imbue our curriculum – however proscribed and rigid – with these vital elements.

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Appendix A

Gwendolyn Brooks, "The Boy Died in My Alley"

to Running Boy

The Boy died in my alley
without my Having Known.
Policeman said, next morning,
"Apparently died Alone."

"You heard a shot?" Policeman said.
Shots I hear and Shots I hear.
I never see the Dead.

The Shot that killed him yes I heard
as I heard the Thousand shots before;
careening tinnily down the nights
across my years and arteries.

Policeman pounded on my door.
“Who is it?” “POLICE!” Policeman yelled.
“A Boy was dying in your alley.
A Boy is dead, and in your alley.
And have you known this Boy before?”

I have known this Boy before.
I have known this boy before, who ornaments my alley.
I never saw his face at all.
I never saw his futurefall.
But I have known this Boy.

I have always heard him deal with death.
I have always heard the shout, the volley.
I have closed my heart-ears late and early.
And I have killed him ever.

I joined the Wild and killed him
with knowledgeable unknowing.
I saw where he was going.
I saw him Crossed. And seeing,
I did not take him down.

He cried not only “Father!”
but “Mother!
Sister!
Brother.”
The cry climbed up the alley.
It went up to the wind.
It hung upon the heaven
for a long
stretch-strain of Moment.

The red floor of my alley
is a special speech to me.



Fostering Metacognition in K-12 Classrooms: Recommendations for Practice

Markeya S. Peteranetz

Abstract

This article makes the case for why it is important for educators to intentionally foster students' metacognition. Metacognition is often defined as *thinking about thinking*, but it is more complete to describe it as including knowledge, awareness, and control of one's own cognition and human cognition in general. Two primary components of metacognition, knowledge of cognition and regulation of cognition, are presented and described with regard to learning contexts. Metacognition grows as part of cognitive development and can also be further enhanced through instruction at all levels of schooling. Research that indicates metacognition can be increased through instruction and is associated with academic achievement is reviewed. Steps for embedding metacognition instruction are described and principles for incorporating metacognition instruction into classroom instruction are presented. Metacognition instruction, including strategy instruction, may be either implicit or explicit, and can and should be incorporated into typical classroom instruction.

Keywords: Metacognition, strategies, strategy instruction, embedded instruction

Genre: Theoretical/Conceptual

Imagine a middle school where eighth grade American history is taught by four different teachers: Ms. Pierson, Mr. Samuels, Mr. Brown, and Ms. Andrews. All the eighth-grade students are learning about the United States’ founding fathers, but these teachers differ in how they help students learn the material. Ms. Pierson tells her students to read the chapter from the text book and gives them class time to do so. Down the hall, Mr. Samuels also gives his students class time to read the chapter, but he gives his students a worksheet to complete as they read. He tells them, “Fill this sheet out as you read, and turn it in when you are done. We will talk about it tomorrow and see how well you understand the chapter.” The worksheet contains a matrix organizer (as shown in Figure 1) that provides space for the students to record important information about the founding fathers. The top row of the matrix contains all the founding fathers who are discussed in the chapter, and the left-most column contains categories that can be used to compare the founding fathers.

In the next classroom, Mr. Brown gives students the same matrix organizer worksheet and time to read the chapter in class. However, before Mr. Brown lets his students begin working he tells them, “Let’s look at the different topics and categories in this matrix organizer. You can see that

	George Washington	Thomas Jefferson	Benjamin Franklin	John Adams
Birthdate				
Death date				
Nickname				
Profession(s)				
Offices held				
Documents signed				

Figure 1. A sample matrix-organizer for learning about the Founding Fathers.

the top row lists several founding fathers such as George Washington, Thomas Jefferson, and Benjamin Franklin. You can also see the left column lists categories such as birthdate, death date, and nicknames. Now that we know what is on the matrix organizer, let's look at the chapter. Follow along with me as I start reading the section about George Washington. 'George Washington was born on February 22, 1732 in Westmoreland County, Virginia.' I remember that birthdate is a category in my matrix, so I am going to write 'February 22, 1732' in the cell that connects George Washington and birthdate. As you read, look for information that corresponds to the topics and categories in the matrix. By the end of the chapter you should have filled all the cells."

Ms. Andrews also has her students complete a similar matrix organizer worksheet while completing the reading in class. The matrix she provides is identical to the one that Mr. Samuels and Mr. Brown used, except that the one Ms. Andrews provides does not include "professions," "offices held," and "documents signed" in the list of categories. When providing the matrix, she explains, "This table is called a matrix. It has rows and columns that can be used to organize any information that compares two or more topics along one or more categories in a way that makes it easier to remember information and see relationships within that information. I have already provided the topics and some categories for you. When creating a matrix, we put the topics on top. As you can see, the topics of this chapter include many of our founding fathers, such as George Washington, Thomas Jefferson, and Benjamin Franklin. The categories are in the leftmost column, and they are the characteristics used to compare the topics. You can see I have given you a few sample categories: birth date, death date, and nicknames. You can also see that I left some of the boxes in that column blank, because you need to generate a few categories on your own. As you read the text, try to find the details that intersect topics and categories. For example, one of George Washington's nicknames is the Father of His Country. Such details go in the box that is at the intersection of the relevant topic (e.g., George Washington) and category (e.g., nickname). After you read each paragraph, be sure to ask yourself, 'Can I put anything from that paragraph in my matrix?' If you pause after each paragraph, you will be more likely to capture all of the important details in your matrix. Once you have finished reading the chapter and have completed your matrix, you will have an excellent study tool that you can use to study for the next test. It should be easy for you to see the similarities

and differences among these founding fathers, and seeing those relationships will help you better understand the roles they played in our country's history." After Ms. Andrews finishes her explanation, the students begin reading and completing their matrices.

The four teachers at this middle school are teaching the same material, but the extent to which their methods support student learning differs considerably. Ms. Pierson did the least: she only provided students class time to read. She did not provide any additional support for her students' learning, and it is completely up to the students to learn from the reading. Mr. Samuels helped students learn by providing the matrix organizer. This instructional tool helped students extract and organize important information from the reading, but Mr. Samuels did not show them how to use it, tell them why it is a beneficial tool, or provide any additional support that would help the students use this type of tool in the future. Mr. Brown provided the same instructional tool, but he showed students how to learn by modeling how to use it. He also prompted his students to look at the structure of the matrix organizer before reading so that they could use it efficiently. However, Mr. Brown failed to explain why it is a beneficial tool or provide additional information that would help the students use this type of tool independently in the future. Ms. Andrews provided the same type of instructional tool, but she supported students' present and future learning. She taught students how to use it, why it is a helpful learning tool, and how they can create a matrix independently in the future. Moreover, Ms. Andrews prompted students to monitor their organizer use periodically by pausing to ask themselves questions about how they could use it. Ms. Andrews supported students' learning the most because she taught students how to learn by providing explicit instruction on how, why, and when to use matrix organizers.

Mr. Brown and Ms. Andrews demonstrate different ways teachers can teach students how to learn by fostering metacognition, that is, providing instruction related to knowledge, awareness, and control of one's thinking. Mr. Brown modeled metacognition and prompted students to use metacognition without expressly acknowledging it, a practice referred to as implicit metacognition instruction. Ms. Andrews explicitly taught students how and why to use the matrix-learning strategy, explained why it is beneficial, and pointed out how they could use their organizer in the future. Ms. Andrews's practices reflect what is known as explicit metacognition instruction. Broadly, metacognition instruction is instruction that is intentionally designed to encourage the use of metacognition. Metacognition

enables students to strategically apply skills and strategies across learning contexts so that they can learn effectively and independently. Metacognition instruction fosters metacognition and can help students develop as independent learners.

This article makes the case for why it is important for educators to foster students' metacognition intentionally like Mr. Brown and Ms. Andrews did. First, I provide a conceptual overview of metacognition. Second, I describe the role of metacognition in education, including the relationship between metacognition and academic achievement and factors that can lead to changes in metacognition. Third, I describe metacognition instruction and review research related to metacognition instruction. Finally, I provide recommendations for educators interested in fostering metacognition.

Conceptual Overview of Metacognition

Metacognition is frequently given the terse definition, "thinking about thinking" or "cognition about cognition." The term was introduced by Flavell (1979), and his early ideas have been analyzed and expanded upon in the 35 years since. A more recent conceptualization of metacognition describes it as including knowledge, awareness, and control of one's own cognition and human cognition in general (Tarricone, 2011). Although there is not complete consensus in the literature about what is and is not metacognition, many theorists and researchers recognize that metacognition includes both knowledge of cognition and regulation of cognition (Schraw, 1998; Tarricone, 2011), also referred to as metacognitive knowledge and metacognitive skills (Veenman & Spaans, 2005; Veenman, Van Hout-Wolters, Afflerbach, 2006), respectively. Figure 2 provides a conceptual framework for frequently identified components of metacognition.

Knowledge of cognition includes what a person knows about strategies, his own thought processes, and people in general as cognitive beings (Pintrich, 2002). It includes the sub-components of declarative, procedural, and conditional knowledge (Schraw, 1998; Schraw, Crippen, Hartley, 2006; Veenman, 2011). Declarative knowledge includes knowledge about one's own cognitive abilities and factors that influence learning and performance. For example, most first graders recognize that it is more difficult to remember how to spell a ten-letter word than a three-letter word:

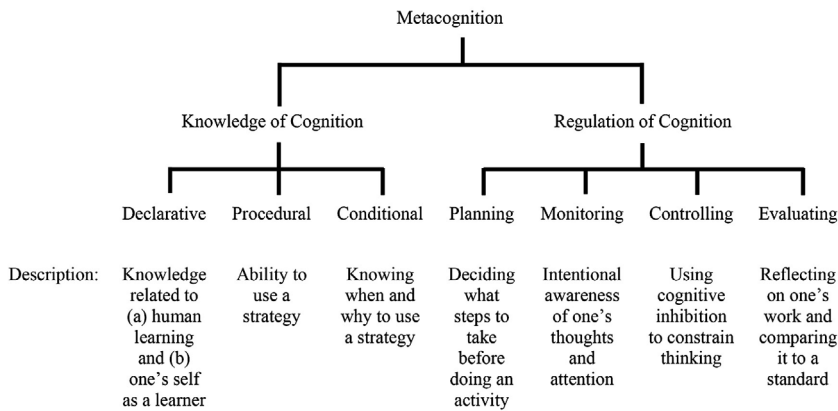


Figure 2. Theoretical framework of metacognition.

the length of the word influences one’s ability to remember its spelling. Procedural knowledge is knowledge of how to carry out tasks and strategies. Procedural knowledge enables high school students to create an effective outline before writing a paper or take notes during a lecture. Conditional knowledge refers to the understanding of when and why to use a particular strategy; that is, knowing and recognizing the conditions under which a strategy should be used. An algebra student uses conditional knowledge when deciding to underline important information and then check her work after completing a complex word problem, but not use those strategies when completing a problem that can be solved mentally.

The different types of knowledge of cognition often are used in concert as an individual completes a task. As an example, imagine Emma is reading a novel for her seventh grade English class. Emma knows that she frequently gets confused while reading novels because she has difficulty remembering details about each individual character. She knows that like most novels, this new novel will likely have several characters, and the author will likely describe the physical appearance and personality of each character as well as any important relationships among characters. Emma decides to create a graphic organizer that can be used as a reference when she gets confused while reading or when her class is discussing the book. On a piece of paper, Emma creates a matrix by writing the main characters’ names in one row toward the top of the paper and

listing a few categories for comparison like “appearance” and “relationship to others” down the left-hand side. As she reads, she adds more categories and characters’ names, and she fills in the cells of the matrix. She includes a page number each time she puts a note in a cell so she will be able to find the information again, if necessary.

Each aspect of metacognitive knowledge is found in this example. Emma’s understanding of her weakness as a reader exemplifies declarative knowledge. Her recognition of the appropriateness and usefulness of a graphic organizer for comparing story characters indicates she has conditional knowledge about the matrix strategy. Her ability to use the matrix strategy reveals she has procedural knowledge. Emma’s decision to use page number references reflects her declarative knowledge of general human cognition, because she recognizes that it is unlikely that a person will remember the exact location of a single detail within a novel.

Regulation of cognition makes up the “active” side of metacognition (see Figure 2). This group of skills includes processes such as planning, monitoring, controlling, and evaluating cognition (Schraw, 1998; Veenman & Spaans, 2005). Planning cognition includes things such as goal setting, pre-selecting strategies, and determining the order in which steps are completed. Students who set goals related to the number of books or pages they will read in a week or create a plan for completing a term project are engaged in planning. Monitoring cognition is awareness of comprehension, thought processes, and strategy use while completing a task (Schraw & Moshman, 1995). Monitoring allows learners to recognize when they do not understand what they are reading, and it also allows them to use strategies flexibly. Controlling cognition includes processes such as managing attentional resources, inhibiting undesired responses, and constraining thoughts (Zimmerman, 2000). Students who are able to control their cognition are able to ignore potential distractions such as classmates’ conversations and can keep their focus on the task at hand. Evaluating cognition includes detecting and correcting errors, comparing outcomes to goals, reflecting on performance, and gauging the efficiency of one’s learning (Schraw, 1998). For example, a senior English student is engaged in evaluation when he searches for logical flaws in his argumentative paper, and a fourth-grade student may engage in evaluation by check that she has written complete sentences. Dividing regulation of cognition into these four processes makes it apparent that regulation of cognition can be used before, during, and after the focal cognitive activity (Zimmerman, 2000).

To illustrate the different components of regulation of cognition, consider Jamal, a student who is writing a report about a current United States senator for his eighth-grade social studies class. His teacher allows students to choose the senator they write about, and he has provided a few general guidelines that the report should cover. Each student's report should include information on the senator's schooling, work before becoming a senator, and accomplishments while in office. Students may include other topics that they believe are important or interesting. After Jamal selects his senator, he decides to do some preliminary reading so he can start *planning* his paper. While reading, he *monitors* his understanding and recognizes that he cannot make sense of much of the information about the senator's work in Congress. Jamal then searches the Internet to look up acronyms and jargon he does not understand. Once he has gathered some information, Jamal continues *planning* by creating an outline that will guide his writing. Jamal does not like to write. Therefore, as he works on his paper, he *controls* his attention by removing possible distractions from his work area. After completing his paper, Jamal *evaluates* his work by reading through it to check for errors and to compare his writing to the outline he prepared.

Metacognition in Education

Metacognition plays a large role in educational settings, and consequently has been the subject of a great deal of research in educational psychology. Research has consistently shown that metacognition is positively related to academic achievement (Labuhn, Zimmerman, & Hasselhorn, 2010; Pintrich, 2002; Swanson, 1990; Veenman, Wilhelm, Beishuizen, 2004), and it is one of the greatest influences on academic performance (Schraw, 1998; van der Stel & Veenman, 2010; Veenman & Spaans, 2005; Veenman et al., 2006; Wang, Haertel, & Walberg, 1990). Wang, Haertel, & Walberg (1990) conducted a meta-review to determine which variables had the strongest influence on learning outcomes. They concluded that metacognition has a stronger, more consistent relationship with academic outcomes than virtually any other variable that has been researched, including student demographic variables, students' prior knowledge, student-teacher interactions, and socioeconomic status. Metacognition is associated with achievement outcomes ranging from elementary students'

reading achievement (Jacobs & Paris, 1987) to college students' overall achievement (Young & Fry, 2012).

Research has also shown that changes in metacognitive abilities can result from both development (Krebs & Roebers, 2010; van der Stel & Veenman, 2010; Veenman et al., 2004) and instruction (Hilden & Pressley, 2007; Huff & Nietfeld, 2009; Moely et al., 1992; Pape, Bell, & Yetkin, 2003; Ramdass & Zimmerman, 2008; Veenman, 2013). Flavell (1992) suggested that the emergence of metacognition is connected to traditional Piagetian stages of development. Piaget's theory outlined cognitive development in terms of changes in the way an individual interacts with and reasons about the world. He argued that developmental stages are characterized by the types of mental operations one is capable of completing. In Piaget's theory, the most advanced stage of cognitive development is the formal-operational stage, which is believed to begin around 11 or 12 years of age. The formal-operational stage is characterized by the ability to use deductive reasoning and the ability to perform complex, abstract mental operations (Moshman, 2011). Flavell (1992) argued that formal-operational reasoning requires metacognitive control. Researchers have yet to determine if metacognition precedes formal-operational reasoning or vice versa, but they believe there is a connection between the two.

Changes Due to Development

A general developmental perspective of metacognition is supported by research that has found age-related increases in metacognition across students ranging from third grade through college (Jacobs & Paris, 1987; Krebs & Roebers, 2010; Veenman & Spaans, 2005; Veenman et al., 2004). In their study of the relationship between metacognition, intelligence, and development, Veenman and colleagues (2004) looked across age groups to compare students' learning and use of metacognition on complex, computer-based inductive learning tasks. They found that students' use of metacognitive skills increased with age and contributed positively to task performance. In another study examining the relationship between metacognition and development, Krebs and Roebers (2010) investigated test-taking strategies and confidence judgments among students between the ages of 8 and 12. Students watched a short informational video and were later tested over its content. The testing process had three steps. Students first answered test questions, then gave a confidence rating for each of

their answers, and finally crossed out any answers they believed were incorrect. The researchers found that all students were able to reliably differentiate between their own correct and incorrect answers for low difficulty test items, but that older students (11- and 12-year-olds) were better than younger students (8- and 9-year-olds) at differentiating between correct and incorrect answers for high difficulty test items. It appears that children already have some metacognitive monitoring ability by age 8, but that it continues to develop with age.

Changes Due to Instruction

Even though an individual's use of metacognition might increase as a result of normal cognitive development, there is evidence that metacognition can also be improved through instruction. Research has found that students receiving explicit instruction in metacognitive knowledge and skills improve both their metacognitive abilities (Hilden & Pressley, 2007; Huff & Nietfeld, 2009; Jacobs & Paris, 1987; Moely et al., 1992; Pape, Bell, & Yetkin, 2003; Ramdass & Zimmerman, 2008; Veenman, 2013) and their academic achievement (Haller, Child, & Walberg, 1988; Csíkos, & Steklács, 2010; Schraw, 1998). In one study investigating the efficacy of metacognition-based interventions, students' reading comprehension and mathematics achievement improved following a two-month intervention where fourth-grade students learned about and practiced planning, monitoring, and evaluation strategies (Csíkos & Steklács, 2010). Among other things, students were taught how to activate prior knowledge when reading and how to create a mental model of the situation when working on mathematics problems. Teachers provided unscripted explicit metacognition instruction that was embedded in reading and mathematics lessons. Pre-test to post-test gains in achievement were significantly greater for students involved in the intervention than for students in a control group. That is, the metacognition instruction was more beneficial than traditional reading and mathematics instruction. Similarly, Hargrove and Nietfeld (2015) found that incorporating extended metacognitive training into a college course lead to increases in students' metacognition—increases that were not seen in students taking a similar course that did not include the metacognitive training.

In their meta-analysis of studies examining metacognitive instruction of reading comprehension, Haller, Child, and Walberg (1988) concluded

that metacognitive skills training might have the greatest impact for middle-school aged students, a notion further supported by a later meta-analysis conducted by Dignath and Büttner (2008). Most students begin middle school when they are either 11 or 12 years old, the ages at which formal-operational thinking usually first appears. It is not surprising then that metacognitive training is particularly beneficial for individuals who are developing the mental capacity for such thinking.

Research on Metacognition Instruction

The term metacognition instruction refers to instruction that is designed to build metacognitive knowledge, introduce and develop metacognitive skills, and help students develop a habit of using metacognition. That is, it is instruction with “built in” supports for students’ metacognition. Quantitative research provides evidence that metacognition instruction rarely happens in the classroom (Clift, Ghatala, Naus, & Poole, 1990; Dignath-van Ewijk, Dickhäuser, & Büttner, 2013; Dignath-van Ewijk & van der Werf, 2012; Hamman, Berthelot, Saia, & Crowley, 2000; Kistner, Rakoczy, Otto, Dignath-van Ewijk, Büttner, & Klieme, 2010; Moely et al., 1992). Studies using self-report methodology have found that few elementary or secondary teachers report integrating any metacognitive instruction into their teaching (Clift, et al., 1990; Dignath-van Ewijk, & van der Werf, 2012). For example, Clift and colleagues (1990) found that elementary and secondary teachers rarely integrate explicit strategy instruction (defined in the next section) into their teaching, and when they do they often fail to infuse metacognitive knowledge into their instruction. Other studies involving observations of teachers at the elementary and secondary levels have supported these findings (Dignath-van Ewijk et al., 2013; Durkin, 1978; Hamman, Berthelot, Saia, & Crowley, 2000; Kistner et al., 2010; Moely et al., 1992; Veenman, 2011). For example, Hamman and colleagues (2000) videotaped middle school teachers as they taught three separate lessons throughout a semester. The lessons were 30 minutes long, and each lesson was segmented into 30-second units for coding (therefore each lesson consisted of 60 segments). The researchers found that less than 7% of segments contained an instance of metacognitive instruction. Similarly, Kistner et al. (2010) found that secondary mathematics teachers in Germany, on average, provided between one and two

metacognitive strategy instructions during a 45-minute lesson. Dignath-van Ewijk et al., (2013) used both self-report and observation to determine how much metacognition instruction teachers included in seventh grade mathematics classes. Observations revealed that teachers on average provided fewer than four metacognition instructions during a 45-minute period. Additionally, there was no correlation between observed metacognition instruction and teachers' self-reports of metacognition instruction. This finding has at least two possible explanations: either teachers and researchers have different ideas of what constitutes metacognition instruction, or teachers do not accurately estimate their metacognition instruction. Overall, these studies indicate that little metacognition instruction takes place in k-12 classrooms.

A few studies have examined how teachers foster metacognition from a qualitative perspective (Perry, 1998; Perry & VandeKamp, 2000; Perry VandeKamp, Mercer, & Nordby, 2002). Perry and her colleagues studied metacognition instruction in elementary school classrooms. When not involved in relevant professional development, some teachers incorporated frequent metacognition instruction into their teaching, and some rarely or never incorporated metacognition instruction (Perry, 1998). However, while working with researchers in a focused professional development program, teachers frequently used explicit strategy instruction, reflection activities, and classroom discussions involving knowledge of cognition (Perry & VandeKamp, 2000; Perry et al., 2002). For example, two different teachers involved in the professional development program ended each reading lesson with a "sharing circle." In the sharing circle students talked about things they learned about themselves as readers as well as strategies that helped them during the lesson (Perry et al., 2002). This activity builds students' declarative knowledge of cognition (Row 1 of Figure 2) by making self-knowledge and knowledge of relevant strategies explicit. The frequent use of metacognition instruction described by Perry and her colleagues (Perry, 1998; Perry & VandeKamp, 2000; Perry et al., 2002) indicates that metacognition instruction might occur more frequently in some settings than in others, particularly when teachers receive training on how to intentionally foster metacognition. However, research overall indicates that metacognition instruction tends to be rare unless it is intentionally incorporated into instruction.

Recommendations for Fostering Metacognition

There are many things teachers can do to foster metacognition (Joseph, 2009; Paris & Paris, 2001; Paris & Winograd, 2003; Pintrich, 2002; Schraw, 1998; Zumbunn, Tadlock, & Roberts, 2011), all of which belong to one of two broad categories: implicit instruction or explicit instruction. Figure 3 shows a taxonomy of metacognition instruction, including the purpose and examples of each instruction type. The two types of metacognition instruction, implicit and explicit, should be viewed as complementary alternatives and not opposites on a continuum.

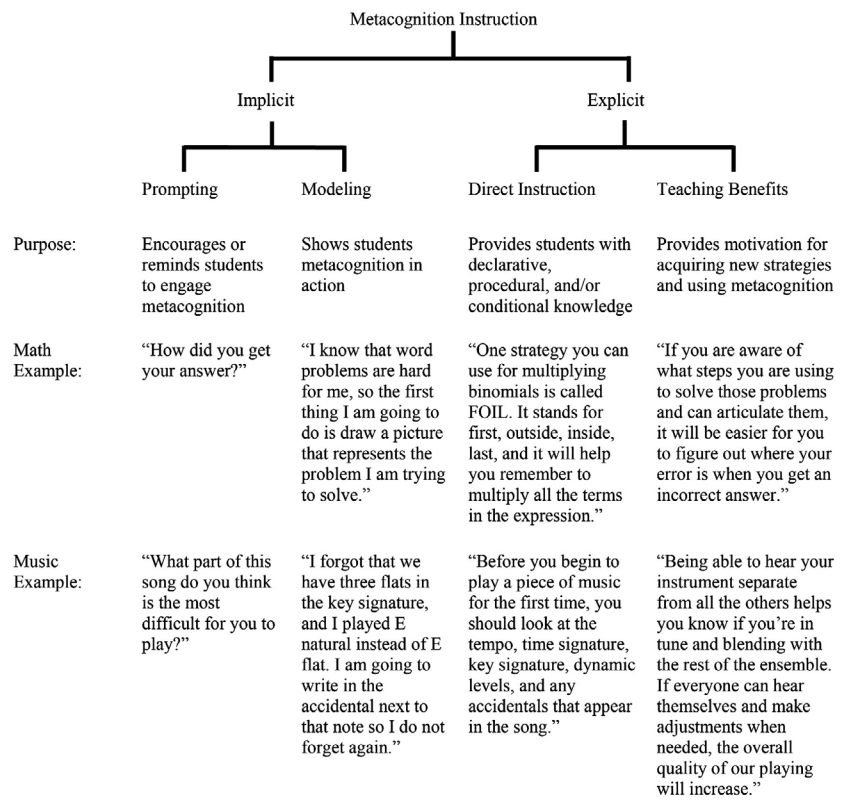


Figure 3. Taxonomy of metacognition instruction.

Implicit instruction occurs when the nature of instruction or related activities makes it likely students will be metacognitive, without necessarily focusing on the “how” or “why” of using metacognition in that context. This includes modeling or prompting the use of metacognition without expressly acknowledging or discussing it (Dignath-van Ewijk et al., 2013; Kistner et al., 2010), like Mr. Brown’s instruction in the opening scenario. For example, when a teacher says to the class, “If the paragraph does not make sense to you the first time, reread it,” he is prompting students to monitor their comprehension and apply a corrective strategy if necessary. The teacher is reminding students to use metacognition without explicitly teaching them how or why to do so. Similarly, prompts may be given in the form of a question, such as when a teacher asks a student, “How did you come to that conclusion?” The question prompts the student to work back through his thoughts and become explicitly aware of them. Elementary students can be prompted to indicate how well they have understood a lesson or a reading passage with questions such as, “Can you explain it to me in your own words?” These types of prompts provide students the opportunity to pause and reflect on their own understanding and thought processes. Similarly, teachers can model cognition by thinking aloud while demonstrating skills for students. For example, a high school history teacher could demonstrate how to read and critique a primary source by reading a document aloud and verbalizing his thoughts related to the credibility of the source and any author biases that are evident. Because many aspects of comprehension, problem solving, and other important skills happen internally, learners can benefit from hearing an expert articulate thoughts related to processes that are typically internal.

Explicit instruction takes place when attention is drawn directly to the “how” or “why” of using metacognition. Usually, this takes the form of the teacher pointing out, explaining, or discussing the benefits of metacognition (Dignath-van Ewijk et al., 2013; Kistner et al., 2010), like Ms. Andrews did in the opening scenario. For example, a teacher may say, “Planning your paper before you write can help you to generate better quality ideas, and it will make it easier for you to determine the best order for presenting those ideas. One way to do this is to write out your ideas and organize them into an outline.” This teacher is describing why planning is a helpful activity and describing steps the students can use to plan successfully. Discussing the benefits of metacognition is particularly important because doing so motivates students to acquire these

new strategies or thinking skills (Veenman et al., 2006). If the teacher continues and provides direct instruction related to creating an outline that will facilitate the writing process, the students are more likely to be successful in using the outlining strategy. Additionally, instruction that addresses both procedural and conditional knowledge will enable students to use the strategy independently in the future because they will know how to use the strategy as well as when the strategy is most helpful. As a different example, elementary teachers can talk to students about factors that influence learning such as individual strengths and weaknesses, the difficulty of a task, or the strategies used while learning. These types of conversations can build students' declarative metacognitive knowledge and promote reflection on ideas that might not have been previously considered.

Both explicit and implicit metacognition instruction are considered important (Joseph, 2009; Paris & Paris, 2001; Paris & Winograd, 2003; Pintrich, 2002; Veenman et al., 2006), but research shows that teachers use explicit instruction less frequently than implicit instruction (Veenman, 2011). One study found that only 15% of teachers' strategy instructions were explicit (Kistner et al., 2010). This is potentially problematic because evidence suggests that explicit strategy instruction is related to gains in student achievement, whereas implicit instruction is not (Kistner et al., 2010). One possible explanation for the different impacts of implicit and explicit instruction can be illustrated by a toolbox analogy. Metacognition can be thought of as a set of tools that students may use in various ways when engaging in learning tasks. Implicit instruction reminds students to make use of the tools in their toolbox, whereas explicit instruction provides students with new tools. If a student already has a particular tool at his disposal, implicit instruction simply promotes continued use of that tool. However, if the student does not have the tool that is being prompted or modeled, the implicit instruction is unlikely to lead to the student using that particular tool. In this case, explicit instruction could provide the student with that particular tool, so that it may be used in the future. From this view, it is likely the addition of new tools to the toolbox (via explicit instruction) that leads to gains in student achievement.

Metacognition instruction often involves teaching students strategies, and in such cases is often referred to as strategy instruction. Strategies are procedures that can facilitate learning or the completion of a task, but

do not necessarily have to be used. Metacognition instruction related to strategies can include explicitly providing *direct instruction* on how and when to use the strategy or *discussing the benefits* of using the strategy, as well as implicitly *prompting* students to use the strategy and *modeling* the strategy. Well-known strategies that can be taught explicitly include note taking (Lee, Lan, Hamman, & Hendricks, 2008), planning strategies such as outlining (Kellogg, 1988), memory strategies such as mnemonics (Johnson & Obi, 1993), and various reading comprehension strategies such as previewing the text, asking questions, and identifying the text structure (Blachowicz & Ogle, 2001). Other helpful strategies that can be taught explicitly include creating graphic organizers (such as the matrix presented in the opening example; see Kiewra, 2004), self-testing, summarizing, and self-monitoring.

Principles for Effective Metacognition Instruction

Three general principles for implementing effective metacognition instruction have been identified (Veenman, 2103; Veenman et al., 2006). First, Veenman proposes that instruction should be embedded into an authentic learning context. Although metacognition could be taught independent of other content, it is most effective when presented concurrently with course material. Embedded presentation allows students to connect the metacognitive knowledge or skills to an authentic learning task. Thus, students see how metacognition can aid their performance in that specific context. For example, an elementary teacher could talk to students about self-monitoring their understanding in conjunction with a specific mathematics lesson and then prompt students self-monitor their understanding during the lesson and subsequent practice activities. Ideally, students' self-monitoring judgments would be shared with the teacher and connected to performance (e.g., completion of practice problems) so that the teacher could provide students with feedback on their monitoring accuracy.

An additional benefit of embedding metacognition instruction is that it can build conditional metacognitive knowledge because students are exposed to the conditions under which a skill or strategy should be used. It can be helpful to explicitly discuss the conditions that should cue students to the need for a strategy because conditional knowledge makes strategy transfer possible. This conditional knowledge is critical because the primary value of strategies is that they can be used in multiple situations. In

the opening scenario, both Mr. Brown and Ms. Andrews embedded metacognition instruction into the lesson about the founding fathers. The students were able to learn and practice the matrix-organizer strategy during an authentic learning task. Ideally, those students would later recognize that they benefitted from using the strategy, and they would be motivated to use the strategy again when completing a similar task.

Veenman's second principle states that metacognition should be taught using what is referred to as informed training (Campione, Brown, & Ferrara, 1982; Veenman, 2013; Veenman et al., 2006). Informed training involves explaining the benefits of using metacognition, and it is represented as "Teaching Benefits" in the taxonomy of metacognition instruction (Figure 3). Understanding such benefits motivates students to use metacognition and increases their expectations of success. This motivation is important because learning and mastering new strategies is an effortful process, and sometimes the benefits of using the strategy are not immediately clear. For example, a high school history teacher might teach her students to pause while reading and mentally summarize each section in the textbook in order to promote comprehension and retention of the information. If the students are not told that this strategy promotes comprehension and retention, the students are likely to believe the strategy is a waste of time, and as a result they will not use the strategy. However, if the teacher explains that pausing to summarize the text can increase what is learned, reduce the amount of time needed for restudying, and improve their performance on quizzes and tests, the students are more likely to be motivated to use the strategy. Ms. Andrews used an informed training approach in the opening scenario when she described how the matrix organizer would help the students learn and prepare for the upcoming test. Because she explained how the matrix organizer could contribute to their learning, Ms. Andrews' students are more likely to use the strategy even if they are not required to do so.

Veenman's last principle of metacognition instruction is prolonged training. The acquisition of metacognitive skills and knowledge is a long-term process, and any efforts to foster metacognition should extend over several weeks and months. Generally speaking, the longer the training, the better results will be (Dignath & Büttner, 2008; Veenman, 2013). For example, a teacher interested in providing note-taking instruction to middle school students is more likely to see long-term improvements in note taking if instruction and feedback take place over the course

of a semester rather than over only a few days. With prolonged training, instruction should initially be primarily explicit, but over time as students begin to master the strategy, implicit instruction may become more common.

Steps for Embedding Metacognition Instruction

As described above as part of Veenman's first principle (Veenman, 2013; Veenman et al., 2006), embedded metacognition instruction is metacognition instruction that presented within course content, rather than separate from focal learning activities. Effective embedded metacognition instruction of skills and strategies can be broken down into five steps.¹

1. Introduce: present the skill or strategy, describe what it is and how it can be used, and demonstrate it.
2. Sell: explain the benefits of intentional use.
3. Generalize: elaborate on how the skill or strategy can be used in other contexts.
4. Practice: provide specific and structured opportunities for students to practice the skill or strategy.
5. Feedback: provide guidance on strategy use, and make corrections as necessary.

Ideally, steps 3, 4, and 5 would be part of an ongoing cycle, where students are regularly presented new situations where the skill or strategy is useful (Generalize), prompted to use the skill or strategy (Practice), and provided corrective feedback when appropriate (Feedback).

Embedded metacognition instruction related to metacognitive knowledge involves fewer steps than metacognition instruction of skills and strategies. Metacognitive knowledge can be fostered by (a) *Introducing* topics related to metacognitive knowledge, such as individual strengths in weaknesses, recognizing someone else's viewpoint, and taking time to think about whether or not new information was fully understood, and (b) allowing time for *Reflection* related to metacognitive ideas. Metacognitive knowledge is built through reflection (Tarricone, 2011), but reflection is unlikely to occur spontaneously. Structured opportunities for reflection,

1. The five steps presented here are based on Kiewra's (2009) four steps of strategy instruction

such as those provided through discussion, journaling, or other writing activities can increase the likelihood that students will engage in meaningful reflection that will lead to increased metacognitive knowledge.

Conclusion

In the opening example, the American history teachers varied considerably with regard to the amount of metacognition instruction they provided. Ms. Andrews used explicit instruction that provided students with the procedural and conditional knowledge they would need to use the matrix-learning strategy for the present assignment and future assignments too. In general, explicit instruction is not seen as frequently as implicit instruction (like that of Mr. Brown), but many teachers do use both implicit and explicit instruction while teaching. In order for metacognition instruction to be effective, it should be embedded within authentic learning contexts, include instruction on the benefits of metacognition, and be ongoing. The steps for embedding both explicit and implicit instruction presented in this article provide educators with a starting point for incorporating more metacognition instruction into their teaching. By providing metacognition instruction of strategies, metacognitive knowledge, and metacognitive skills, teachers can help students be more strategic and independent learners.

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A Technology-Supported Learning Experience to Facilitate Chinese Character Acquisition

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Abstract

Chinese character Learning has been identified as one of the most challenging issues for English-speaking learners of Chinese due to the distinctions between the Chinese writing system and alphabetic languages in terms of orthography, phonology and semantics. In order to support Western students in overcoming the challenges associated with Chinese character learning a contextualized, socio-cultural approach to character learning was designed. Aimed at novice learners of Chinese, this design draws on social constructivism and Universal Design for Learning--contextualizing the learning experience and affording students to work on acquiring characters via several distinct avenues. The project-based inquiry design supports the exploration of Chinese character learning through six research-based learning tools and strategies. These tools include: educational technologies designed specifically for learning Chinese

characters, pinyin & typing, making connections between different levels of linguistic components, stroke animation, handwriting, radical positioning, and character gamification. This learning experience design integrates multiple technology tools, awareness of culture, hands-on activities, and interactive multimodal web technologies that draw on constructivist theories and approaches to language acquisition.

Keywords: Chinese character learning, social constructivist, Universal Design for Learning, Technology Integration, literacy, language acquisition, writing

Introduction

Chinese as a second language has been identified as a challenging undertaking for native English-speaking learners due to its unique properties that drastically differ from English in terms of phonology, morphology, orthography and phraseology (Shei & Hsieh, 2012). In Shei and Hsieh's research, 50% of participants experienced both morphologic and orthographic difficulties closely associated with character learning. The percentage of students reporting difficulties associated with character learning was particularly high in comparison with other difficulties associated with learning Chinese (Shei & Hsieh, 2012). Chinese character learning has become a vigorously researched topic in recent years. Most researchers have focused on improving the learning experience by optimizing presentation and by presenting Chinese characters to learners via technology applications (Chen et al., 2014; Chen, Wang, Chen, & Chen, 2014; Lam, 2014; Lu, Meng & Tam, 2014; Shei & Hsieh, 2012; Taft, M., Zhu, X., & Peng, D. 1999; Wong, Hsu, Sun, & Boticki, 2013; Yan, Fan, Di, Havlin, & Wu, 2013). However, little attention has been paid to investigating pedagogical perspectives regarding the integration of multiple contextually authentic character-learning experiences.

The Chinese character learning experience design described herein was borne out of a three-part inquiry. Namely, a survey of the existing literature on Chinese character learning—used to identify research-based scaffolds for Chinese character learning, a survey of existing language materials and educational technologies associated with those scaffolds—used to develop a resource pool, and a review of teaching and learning theories

and instructional design theories—used to design a pedagogical framework for the learning experience. A five-phase learning experience design is developed based on the mentioned preparation, and the five phases include differentiated inquiry-based collaborative learning; collaborative e-portfolio project creation; peer review and revision; presentation and celebration; and reflection and evaluation. The identified research-based scaffolds are used to set up six stations in the phase one in order to provide differentiated instructions of character knowledge with technologies supporting respectively.

In the following sections, we outline the surveys of literature, materials, and learning theories, we describe the resultant learning experience design, and we unpack the implications such designs can have for learners of Chinese who have no prior experience with character-based literacy.

Chinese Language Learning

Chinese Characters, an Overview

As mentioned above, Chinese characters have been identified as one of the biggest challenges to learning Chinese (Shei & Hsieh, 2012). Three major challenges have been identified in Chinese character learning (Lu, Meng & Tam, 2014). The first challenge is the development of awareness of the structural makeup of characters. A Chinese written character has three tiers: strokes--the basic lines that make up the writing system; radical components--the character parts made of different combinations of strokes; and characters--the smallest meaningful units in the Chinese writing system (Wong et al., 2013). There are eight basic radicals (Lu, Meng & Tam, 2014) that generate 44 additional radical shapes, 439 chunks, and 7000 frequently used characters (Chang, Xu, Perfetti, Zhang, & Chen, 2014) following respective relational rules.

Challenges for American and Western Learners

Native speakers of alphabetic languages typically experience difficulties in comprehending and recognizing the structural rules and cues embedded in characters due to the dramatic difference in orthography. Additionally, producing characters by hand requires learners to execute the correct

stroke order, which is very challenging as well. Stroke order in Chinese character writing is considered a key to character recognition. Moreover, Western learners of Chinese often find it challenging to make connections between characters and pronunciation due to the lack of an explicit sound-symbol relationship between characters and their pronunciation. Finally, homophones (words written using the same character but different meanings) and homographs (words written with different characters but pronounced the same) (O'Grady, Archibald, Aronoff & Rees-Miller, 2010) are common in Chinese--further complicating Chinese character learning.

Elements to Facilitate Character Learning

In order to support students in overcoming the multiple challenges involved in the process of learning Chinese characters, government, language educators, and researchers have worked to develop and investigate the efficacy of a range of elements that support Chinese character learning (see Table 1).

Where there are a range of supports for developing literacy in the Chinese writing system, there is no consensus as to which approaches are the most efficacious facilitators of character learning. Many of these approaches and scaffolds overlap. For example, Pinyin, making connections, and gaming could all be combined within a technology application to support and engage students to learn (Barab, Thomas, Dodge, Carteaux, & Tuzun, 2005, Wong et al., 2013). In the next paragraph the use of Pinyin is discussed.

Pinyin is the phonetic system developed by the Chinese government in 1958 for transcribing Mandarin into the pronunciation system of the Latin syllabary. Pinyin is widely used in Chinese education and it is also used as one of the many input methods to enter Chinese characters into digital mediums. Pinyin is not an official way to write the Chinese language, rather it is the first way most students of Chinese are taught to write and read spoken Chinese. Pinyin spelling is different from character writing, thus, learning Chinese means that learners need to first learn pinyin and then learn how to write characters.

Figure 1 (See Appendix A) created by Taft, Zhu, and Peng (1999) illustrates a complicated multilevel activation framework for conceptualizing the Chinese phrase 现代 (xiàndài, 'modern'). To read this phrase students need to make connections between characters, meaning and

Table 1. Chinese Character Learning Strategies and Supports Culled from the Existing Literature

Chinese Learning Facilitators	Description
Character-specific technology	Facilitate Chinese character learning by implementing multimodal technologies specifically designed for Chinese characters (Wong et al., 2013, Lu, Meng & Tam, 2014)
Pinyin & Typing	Pinyin is a popular precursor to character learning (described later in this section) and is used as the primary input method for creating characters within digital mediums pinyin helps students to combine phonetics and writing system (Chung, 2003, Chang et al., 2014, Guan, Liu, Chan, Ye, & Perfetti, 2011)
Making Language Connections Explicit	Making explicit connections between different Chinese linguistic components during learning and teaching episodes creates the concept of “continuity” in Chinese language—referring to the close relationships and interactions between phonology, morphology, orthography, vocabulary, and phraseology in Chinese (Shei & Hsieh, 2012, Wong et al., 2013, Guan, et al, 2014)
Stroke Animation	Modeling stroke production with voiceover—in order to elicit better performance in character writing (Chen et al., 2014, Chang et al., 2014)
Handwriting	Integrating handwriting practice meant to produce a refinement of visual-spatial understanding—character recognition as well as the strengthening of sensory-motor memory via the act of physical writing (Guan et al., 2011)
Gamification and Serious Games	Leveraging game-like elements to motivate students to engage and persist in Chinese character learning—from traditional Chinese games to devise-based games to character training games adapted for the general language classroom (Hao, Hong, Hwang, Su & Yang, 2010; Lai,Leung, Hu, Tang & Xu, 2010)

pronunciation. To write this phrase, students have to additionally identify the different radicals and the different strokes and stroke order that make up each character. Finally, students need to understand how to combine characters to make words and phrases.

Theoretical Framework

Social constructivism, UDL, and participatory design form the framework for this learning experience design. Specifically, this design is a social constructivist application of Universal Design for Learning (USD) (Edyburn & Gardner, 2009). UDL is an approach designed to support a wide range of learners within individual and collaborative learning settings. It does this by creating multiple pathways to and through content—allowing learners to make their own choices regarding which pathways they follow and what types of artifacts they create as a result of their learning and to demonstrate their understanding.

Participatory design principles were also used in the design of this learning experience. Participatory design approaches seek to ensure ongoing dialogue among designers, classroom teachers and language learners to facilitate design modifications based on classroom dynamics and learner needs.

Social/Cultural Constructivism

According to Vygotsky, learners construct knowledge during interaction with peers or “more knowledgeable others” this constitutes a unique zone of Proximal Development [ZPD]. Social/Cultural Constructivism includes three ontologies: the subjective (internal) reality, the objective reality (external) and the contextual reality (intersubjective). This means learners make meaning in three corresponding ways, based on their senses, rationally via their logic and thinking, and collaboratively through interactions with others (Porcaro, 2011). The corresponding pedagogical strategies related to the three ontologies mentioned above feature prominently in the creation of individual and group meaning via a variety of collaborative hands-on tasks in authentic contexts (Porcaro, 2011). The learning experience design described herein seeks to promote low anxiety, collaborative learning opportunities that allow students to negotiate meaning and

co-construct knowledge with their peers and more knowledgeable others along a variety of pathways.

Universal Design for Learning

Universal Design for Learning (UDL) was initiated by David Rose, Anne Meyer and colleagues at CAST (Center for Applied Special Technology). It aimed to use contemporary understanding about human neurology and learning in the design of learning experiences for students with disabilities in general classrooms (Edyburn & Gardner, 2009). In order to meet specific needs of students with disabilities, UDL emphasizes the principle of understanding student needs neurologically. In considering the receptive, cognitive, and affective differences students categorized as disabled have in comparison with neurotypical students UDL scaffolds the creation of multiple accessible pathways and outputs into, through, and beyond the instructional goals. Universal Design for Learning advocates multiple means of representation of knowledge, multiple means of expressions for students to demonstrate their learning and multiple means for student engagement (Chita, Gravel, Serpa, & Rose, 2011/2012; Edyburn & Gardner, 2009, Hitchcock, Meyer, Rose & Jackson 2002). This mandate for multiplicity is organized by an awareness of the needs of learners with unique physical and neurological capacities to process and interact based on their receptive (visual, aural, tactile...), cognitive (executive function and reasoning), and affective (emotions and empathy) makeup.

In the design described in the next section, the spirit of UDL is used as one of the guiding frameworks in the design of this constellation of character-learning interventions.

Participatory Design

Participatory design involves soliciting user feedback throughout the design process as well as in the planning and integration stages (Könings, van Zundert, Brand-Gruwel, & van Merriënboer, 2007). Participatory design seeks: to address the needs of all parties involved; to illuminate the possibilities to improve for both designers and users; to promote a collective generation of ideas through dynamic project management. Participatory design also generates autonomy and ownership in not only designers

but also participants (Könings et al., 2007). Participatory design seeks to ensure that there is ongoing dialogue between the designer, classroom teacher (facilitator), and students in order to make adequate adjustments to meet the specific able to make decisions about their own learning experience--since they are granted the freedom to choose how to learn character knowledge; how and when to participate in chosen activities within their selected or assigned learning approach; and how to present, perform, or demonstrate what they have learned in the way they prefer. Teachers are invited to make decisions in facilitating and directing students as well--since they are most likely best positioned to make informed student-specific pedagogical decisions.

Learning Experience Design

Background of the Design

As stated earlier, Chinese character learning has been identified as one of the biggest challenges for western learners of Chinese. This intervention is intended to facilitate Chinese character learning for 7-12 graders who have learned pinyin yet have not had any systematic character-learning experiences. At this point, novice-low level Chinese learners have been only passively exposed to characters. The learning experience design described below aims to facilitate a multifaceted technology-supported collaborative learning experience with six research-based Chinese character-learning activities embedded in the thematic narrative context of Chinese New Year.

Objectives of the Design

In order to support learning in this character exploration experience, the objectives of this narrative-based multifaceted social constructivist learning experience design are listed below in Table 2.

A Brief Overview of the Design

This five-phase Chinese character learning experience unit or curriculum is based on notions of inquiry-based collaborative learning,

Table 2. Objectives of the Learning Experience Design

Objectives	Ways to achieve in the Design
Create a learning environment with a low-affective filter	<div>a. Learners are working individually or in a group at their own pace</div> <div>b. Teachers monitor the classroom and provide individual help</div>
Motivate students with engaging and meaningful inquiry-based projects	<div>a. Students are assigned to work in groups of six to learn Chinese characters presented in unique ways at several learning stations</div> <div>b. Students at learning stations engage in tasks that support inquiry and exploration, for example, one task asks students to find out the evolutionary history of Chinese characters, another assigns learners to find out rules of stroke order</div>
Contextualize character exploration within authentic culture and language-related tasks	Chinese New Year serves as the overarching theme or throughline for the learning experience
Integrate character exploration in developmentally appropriate ways	Materials are adjusted based on student language proficiency
Differentiate learning experiences based on students' preference	<div>a. Different options in terms of representation of knowledge, learning activities, and means of demonstration of knowledge are provided for students</div> <div>b. Students are able to plan their own explorations —with support from both teachers and peers</div>
Encourage collaborative learning while supporting individual growth	<div>a. Students work in collaboration with peers</div> <div>b. Activities are structured to ensure positive interdependence, individual accountability, equal participation, and simultaneous interaction</div>

Table 2. Objectives of the Learning Experience Design *(continued)*

Objectives	Ways to achieve in the Design
Strive for different forms of peer interaction	a. Character recognition tasks provide opportunities for students to practice interpretive reading b. Group discussion elicits interpersonal communication c. Individual presentation and group presentation require students to practice presentational communication
Teachers included as co-designers to adapt the design to their classroom	Teachers are invited to make decisions based on student language proficiency and class culture.
Adjust learning design based on cross-group observation and communication of needs as well as reflection on classroom dynamics	There are ongoing conversations between designers, teachers, and students in order to respond to student needs

technology-supported portfolio building, iterative drafts and formative peer evaluations, performances of understanding and knowledge celebration, and reflective summative feedback. The five phases are listed in Table 3.

Table 3. Fives phases of the present learning experience design

Order of Phases	Name of Phases
Phase one	Differentiated Inquiry-based Collaborative Learning
Phase two	Collaborative E-portfolio Project
Phase three	Peer review and revision
Phase four	Presentation, feedback and celebration
Phase five	Reflection and Improvement

As stated earlier, characters are presented in unique ways at six different learning stations in phase one. Learners are assigned to a particular station but are also encouraged to explore one or two additional stations if they have time. At each station, students are provided with differentiated ways to participate in the learning process. For example at the calligraphy practice station students do calligraphy while others do paper cutting and still others explore character games. Finally, students are able to choose different ways and different technologies to demonstrate and share their knowledge with their peers. For example, students can create a traditional poster, make a booklet, or use iPad apps to craft their project as long as their resultant artifacts align with the requirements of the station as outlined in the rubrics co-created by the teacher.

Roles and responsibilities

Role of the teachers. While the general idea for each learning station was designed beforehand, teachers are co-designers of the learning experience. Since all the learning stations are situated in the classroom, the teachers in charge in each classroom has an opportunity to work in concert with the designer in order make adjustment to the stations in order to best serve their specific students' needs and interests. Additionally, to ensure engagement and ownership participatory design principles have been implemented in order to ensure ongoing communication between learners, teachers and designers.

Role of the students. Students are co-constructors of knowledge in collaborative learning with the six research-based character-learning stations. Students are offered the opportunity to participate in the design and are invited to engage in democratic conversation with teachers to provide feedback to improve current and future versions of the curriculum.

Technology-Supported Intervention to Facilitate Chinese Character-Learning

The narrative-based multifaceted social constructivist Chinese character learning experience can be divided into five phases: differentiated inquiry-based collaborative learning; collaborative e-portfolio project creation; peer review and revision; presentation and celebration; and reflection and evaluation (for an illustration of the entire process, see Appendix B).

Phase One: Differentiated Inquiry-based Collaborative Learning. As mentioned above, the character learning experience is contextual and integrated into curriculum, and is introduced via the Chinese New Year story. With the Chinese New Year theme serving as the context, six learning stations are used to facilitate student character learning (see Table 4).

In phase one learners first read the Chinese New Year story as a class, new words are introduced in pinyin accompanied with character presentations for the most frequently used words. Learners are assigned to groups of five to explore characters from the Chinese New Year story perspective based on the tools and activities at their station. In experiencing multiple stations and by talking with other students, learners are exposed to multiple representations of knowledge about the same characters (Porcaro, 2011 Chita, Gravel, Serpa, & Rose, 2011/2012).

Table 4. Overview of Six Chinese Character Learning Stations

Stations	Approaches	Tools/ Technologies
Character evolution	Connections / technology/ (culture)	Video clips, presentational technology (e.g. spark video, show me, sock poppet, PPT, prezzi, etc)
Animation of characters	Stroke animation/ technology	Online website, character training apps (monki Chinese classroom, Fun Chinese, etc.), presentational technologies (spark video, show me, sock puppet, pic collage, and etc.)
Calligraphy Practice	Handwriting (culture)	Brush, paper, ink, calligraphy apps
Typing Practice	Pinyin & Character Input technology	Interpersonal communication technology (wechat, instagram, groupme, twitter, etc), presentational technologies (same as above)
Radical and character games	Gaming/ technology	Character game app (Chinese writer, quizlet, etc.), character flashcards, Chinese character board game, presentational technologies (same as above)

Instructions, learning materials and project ideas for each learning station are developed ahead of time based on the characters from the story. Students are assigned the group roles of leader, coordinator, monitor, questioner, recorder to ensure all participants have a specific responsibility within the learning task and to promote equal participation and simultaneous interaction for learner engagement (Kagan, 1994, Chita, Gravel, Serpa, & Rose, 2011/2012)—such structures maximize productive learning in small groups (Kagan, 1994, Novodvorsky & Weinstein, 2014). Teachers circulate to facilitate, assist, encourage, prod, question, and to ensure student involvement (Novodvorsky & Weinstein, 2014). At the end of the exploration, students are to create an individual representation or project about the content they have learned and how they learned it at their experience at each specific station.

Phase Two: Collaborative E-portfolio Project. Students return to their home groups of six with one member from each serving as an expert representing each learning station to share his or her learning experience and project. Rubrics are provided to guide students in peer evaluation and self-evaluation of their projects.

Next, students work in groups to conduct a web-quest to identify:

- A. More information about all the six learning approaches
- B. Additional Chinese character learning strategies,
- C. The history of Chinese characters,
- D. Add more examples for materials that have been used in each learning station.

Finally a culminating e-portfolio developed as a summative project. Students are required to work together to build e-portfolios on the topic of Chinese character learning with the knowledge they gained from their previous learning experience and the web quest. The e-portfolio also serves as a collaborative learning space enabling cooperation, peer support, and constant editing. E-portfolios can be used as procedural assessment tools that provide a variety of evidence to formatively and summatively document student learning (Ambrose, Martin, & Page Jr., 2014, Attia, 2010). Learners are encouraged to add to their e-portfolios throughout the course in order to document their group's experiences with characters.

Phase Three: Peer review and revision. Each student group then reviews the e-portfolios created by other groups--making critical formative comments based on the provided rubrics. In the process of peer review, students gain additional opportunities to interact with characters, gain insights into their own portfolio composition, and potentially enjoy an enhanced sense of agency.

After peer review each group discusses possible revisions to their portfolios based on feedback received from peer groups--deciding on an action plan to ensure equal participation in making the necessary revisions. Then, the whole group revises their portfolio and prepares for their portfolio presentations in front of the entire class.

Phase Four: Presentation, feedback and celebration. A range of options are provided in terms of format and modes of action and expression regarding portfolio presentations. This flexibility draws on the principles of Universal Design (Chita, Gravel, Serpa, & Rose, 2011; 2012; Eddyburn & Gardner, 2009). The teacher can use the presentation and e-portfolio as a summative grade and offer constructive feedback for future revisions.

After the presentations, the teacher can facilitate the Chinese New Year celebration, which provides an authentic and culminating linguistic and cultural context to elicit oral production and character literacy in Chinese. The celebration can alternatively be adjusted according to the most closely related seasonal, historic, governmental, or cultural holiday; for example, if the temporal context is mid-autumn the celebration can be a Mid-Autumn Moon festival.

Phase Five: Reflection and Improvement. After the celebration, teachers and learners complete a brief questionnaire reflecting on the whole experience in terms of strengths and weakness in order to facilitate further improvement of the learning experience for future iterations of the learning experience design.

Pedagogical Considerations — Supporting Elements for Character Learning

As mentioned above, this is a multifaceted co-constructed knowledge process supported by multiple elements based on several theories,

technologies, and pedagogical considerations. The physical settings, technologies, and character learning tools are aspects of the design that ensure that the activities and content is scaffolded and introduced with pedagogical rationales--fostering productive learning in high-support learning environment (Gibbons, 2015).

Physical Environment

Physical environment for learning can influence the way teachers and students feel, think, behave and interact with each other (Novodvorsky & Weinstein, 2014). Well-designed physical learning environments provide security and shelter, foster social contact, demonstrate symbolic identification, and facilitate learning activities in a pleasing atmosphere (Steele, 1973, cited from Novodvorsky & Weinstein, 2014). The learning environment for Chinese character learning should display authentic Chinese cultural products and language signs. In the context of Chinese New year celebration, students can notice, co-create, explore, and interact with Chinese characters in a classroom filled with Chinese New Year decorations, such as lanterns, red couplets, traditional paper cutting, and Chinese character crafts. It is important for western learners to notice and feel comfortable seeing signs in Chinese characters while transiting from pinyin to characters. Chinese word walls with beginning characters and classroom survival phrases should be prominent on the classroom walls. Finally, seats should be put in clusters to facilitate group activity and discussion.

Technology Supports

There are many websites and mobile device apps and games designed to support Chinese character learning. Often these apps are designed with specific approaches to character learning. These include a focus on stroke order, handwriting practice, character recognition, and character history among others. The apps chosen for each station should reflect the best in current designs available for the devices accessible to the students and understood by the teacher. Students are provided with instructions and manuals concerning when and how to use apps at each station.

Chinese Character-specific Supports

Character-related supports include Chinese traditional games, starting character activities, class notes, color-coded character badges, gradual replacement of pinyin, and Chinese names in Characters among others. Class notes are required to document group-learning progress and students are encouraged to keep learning journals that include reflections on characters and character learning. These supports are important as pinyin, initially used for most written assignments and classroom representations is gradually replaced by characters based on students' progress in character learning—with the goal of achieving a smooth transition from pinyin to characters.

Limitations and Future Directions

This learning experience design is based on the first author's previous teaching experience, collaboration with colleagues, review of empirical literature, and instructional design experiences. The design has been successfully piloted in the classroom with formative feedback received from both teachers and learners for iterative design improvement. However, no data of any kind was systematically collected. Therefore, formal research is needed and, as of the writing of this manuscript, in progress. The first author is implementing and collecting data on implementations of this experience in two different high school classrooms in the US Midwest to evaluate the design's efficacy, pedagogical value, and feasibility in similar classroom settings. Additionally, this design requires a certain facility with technology, constructivism, and project-based learning.

Conclusion

This learning experience design for Chinese character acquisition is intended to support western-learners of the Chinese during their transition from pinyin to Characters via research-based facilitators enhanced by collaborative learning approaches and technology applications. During the process of designing and piloting the experiences, constant adjustments and revisions were made due to the participatory orientation of the first author.

The creation of multiple pathways into and through the process of decoding, recognizing, and creating characters accommodates learners with different interests, abilities, and strengths. The co-construction of knowledge via the portfolio and peer review process promotes increased exposure to content, positive interdependence, and individual accountability within their learning community. Additionally the thematic embedding of the experience within a culturally relevant event serves to contextualize character knowledge that might otherwise be seen as abstract and disconnected. These and other strategies described herein represent a multifaceted approach to supporting western learners along their path to developing written literacy in Chinese. By drawing on learning theories empirical research and emerging technologies we can design curricula and learning experiences that afford learners heterogeneous, hierarchical, multimodal interactions with challenging content.

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Appendix A

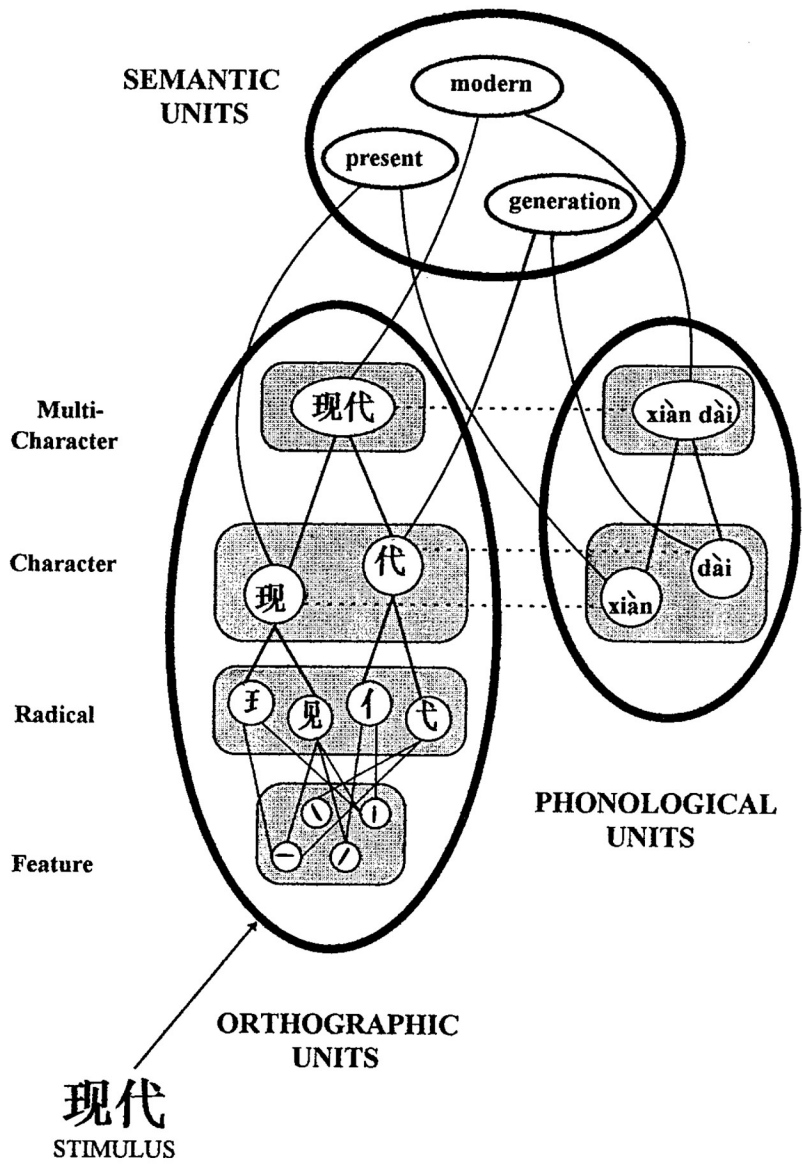


Figure 1: A Multilevel activation framework conceptualizing the lexical processing of Chinese Words (Taft, M., Zhu, X., & Peng, D, 1999)

Appendix B

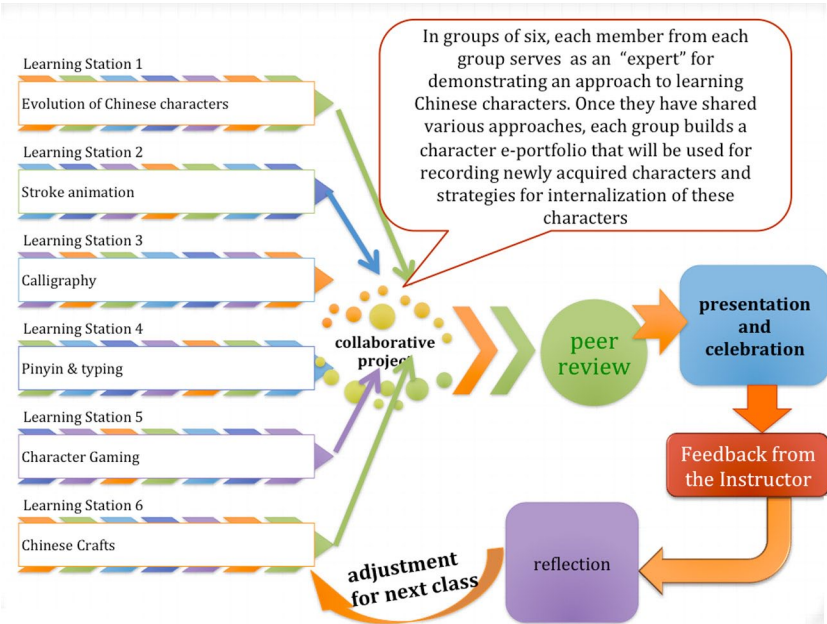


Figure 2: Technology-Supported Learning Experience to Facilitate Chinese Character-Learning