

ADVANCES IN GLOBAL EDUCATION AND RESEARCH

Volume 2

Editors

Dr. Wayne B. James

Dr. Cihan Cobanoglu

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Editors

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Part 1: Adult Education

Idiom Assessment: To Go off the Beaten Path

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Abstract

Idioms are omnipresent in language education. Idioms are used as a colorful language to express ourselves and depict our thoughts more artfully, accurately, and efficiently. A person utters approximately 4.7 million novel and 21.4 million frozen metaphors over a sixty-year of his life (Pollio, Barlow, Fine, & Pollio, 1977). In this sense, multiple studies have examined different aspects of idiomatic phrases: idiom processing models (Liontas, 2002); the importance of context (Liontas, 2007); idiom comprehension processing models (Abel, 2003); important factors in processing idioms in L1 and L2 (Cieslicka, 2015); the effect of L1 and supportive context (Türker, 2016), to name a few. Despite their ubiquitous nature, assessing idioms is viewed as a stumbling block for second language teachers. Said another way, idiom assessment has been an oft-neglected topic in second language acquisition (SLA). Accordingly, idiom assessment looms as an important issue deserving serious attention in language education. This article then sheds light on multiple assessment techniques that educators can harness to assess the idiomatic competence development in language learners. Beginning with the notion of idiomaticity, the author then introduces an L2 idiom processing model—Idiom Diffusion model proposed by Liontas (2002). Finally, the author proposes sound assessment techniques such as portfolio assessment, discrete-point approach, idiom detection, and task-based format to be employed for assessing idiomatic competence of language learners. The validity of the techniques is closely scrutinized, their strength reiterated, and new suggestions for research and pedagogical purposes are offered.

Keywords: idiom diffusion model, discrete-point approach, idiom assessment, idiom processing models, portfolio assessment

Introduction

Idioms have permeated English language education in both academic and non-academic contexts. English speakers use idioms not only to express themselves but also to portray their thoughts more artfully. Idiomaticity is considered an integral part of English language insofar as Jackendoff (1997) states that the number of fixed expressions are equal with that of single words in a native speaker's mental lexicon. Searle (1975) speaks to the importance of idiomaticity and posits that we should speak idiomatically unless there is a reason to speak without idioms. This then comes as no surprise that a second language learner should shoulder the responsibility of idiom learning. As such, educators are bound to introduce and assess the idiomatic competence development in their teaching time. To reassure that learners comprehend the idioms and can use them in context, it is imperative for educators to assess language learners in both formative and summative formats to make sure that learners can not only comprehend the literal meaning of idioms but also they are able to arrive at the figurative meaning of the idiomatic phrase. In the same vain, learners need to be able to both accurately and appropriately use idioms to effectively participate in a discourse with a native speaker (Liontas, 1999). In short, idiom assessment must be integrated with our language learning curriculum.

Background

Educators need to be familiar with the idiomatic knowledge of L2 learners. Research findings suggest that the idiomatic knowledge of L2 learners lag behind their knowledge of vocabularies (Steinel, Hustijn, & Steinel, 2007). Furthermore, L2 learners show a low level of collocational knowledge in formally written tasks compared to native speakers of English (Howarth, 1998). Research has indicated that this lack of competency is one of the reasons that learners fail to achieve native-like fluency. To that end, educators should bear in mind that idiomaticity needs to be an integral part of language education.

Long before teaching a language, we need to set the student learning objectives (SLOs). Only then we can accurately design tests to assess students' learning. Enhancing our understanding of the ways a native and a non-native understands and process idioms contribute to creating more efficient and fair ways to assess the development of their idiomatic competence.

To assess idioms we need to know the idiom definition, components, and how they are processed. Although idioms are one of the commonest forms of figurative language in English (Gibbs, 1999), there is no scholarly accord on the definition of idioms (Liontas, 2002). Additionally, Idioms are not defined as a unitary class of expressions. Idioms are defined variously, however, the widely cited definitions imply that the meaning of an idiomatic phrase is not equal to the sum of the constituent parts (Fernando & Flavell, 1981; Fernando, 1996; Makkai, 1972).

Warren (2005) posits that the process of meaning making—while processing an idiom— by a native speaker is through a bottom-up approach. However, the same does not hold true for non-natives. In case of non-natives, learners tend to arrive at the figurative meaning of the idiomatic phrase by employing a top-down approach. Said another way, non-native speakers tend to juxtapose the phrase with its equivalent in their L1. Accordingly, she posits that idiomaticity is “nativelike choices of expressions.”

Warren (2005) conducted an empirical study, which amounted to findings concerning techniques that both native and non-native speakers of English employ during idiom processing. Warren introduced a definition to break with the traditional views on idiomaticity, which heavily relied on linguistics and grammar. To that end, Warren presented a definition by Fillmore (1988) which views idiomaticity as the knowledge one acquires beyond the lexical level. Warren further assumes that the preference to use idioms had to do with the economy of effort.

Idioms are colorful language to articulate oneself and portray our thoughts artfully. Native speakers use idioms effortlessly, however, this does not hold true for non-native speakers. It then comes as no surprise that developing idiomaticity and idiomatic competence is a hard task to attain for non-native speakers of English. The number of fixed phrases in the mental lexicon of a native speaker is roughly similar to that of single words (Jackendoff, 1997).

This is important, however, to mention that multiple studies have been conducted regarding the importance of vocabulary in language education: the effects of repetition on vocabulary recall (Peters, 2014); Incidental learning (Webb, Newton, & Chang, 2013); Corpus-based versus traditional learning (Daskalovska, 2015). In this sense, many articles have been authored concerning how to assess vocabulary: Vocabulary assessment for parents (Libertus, Odic, Feigenson & Halberda, 2015); picture vocabulary assessment and autism (Dixon, Carman, Tyler, Whiting, Enoch & Daar, 2014); vocabulary assessment and verbal short-term memory (Verhagen

& Leseman, 2016); vocabulary learning through extensive reading with audio support (Webb & Chang, 2015). Abundant vocabulary studies regarding learning and assessment are available. These studies, nonetheless, include idioms in terms of learning. The related literature, however, do not encompass idioms when it comes to assessment. Put simple, idiom assessment is an oft-neglected topic in English language education. It is hoped that the present article can contribute to the growing body of literature of idiomaticity and enrich sparse literature of idiom assessment. What encouraged the author to write this article is the fact that educators, predominantly, treat idioms the way they instruct and assess vocabularies. In contrast, these two are inherently different. This distinction is deeply rooted in the nature of idioms. To illustrate types and nature of idioms, in what follows, an L2 idiom processing model (Idiom Diffusion Model) will be introduced.

Idiom Diffusion Model

Proposed by Liontas (2002), diffusion model argues how L1 and L2 idiom processing are distinctly different. Liontas highlights that a major issue in idiomaticity arises from a lack of scholarly accord on the definition of 'idiom'. He then proposed a continuum known as conceptual lexical-image continuum. According to this continuum, idioms fall under three levels as follows:

Lexical-Level (LL) Hypothesis explains if a target (L2) idiomatic phrase already exists in the learner's L1, the learner will attempt to decode the L2 expression by referring to his L1 idiomatic knowledge. No contextual support is needed for the interpretation of such idioms as L1 and L2 idioms are more or less the same. Semi-Lexical Level (SLL) Hypothesis posits if the L2 idiom is similar, but not identical to the corresponding idiom in the L1, the learner will experience the same processes. The learner may also experience additional lexical items, which may or may not be present in the L1 idiom. Post-Lexical Level (PLL) Hypothesis delineates if an L2 expression does not exist in the learner's L1 language, or if it evokes a divergent mental image, then the learner will heavily rely on the contextual cues to draw upon his native idiomatic knowledge.

Idiom Diffusion model solely takes vivid phrasal (VP) idioms into account. Including the following characteristics, every phrasal unit—noun or verb—is called a VP idiom:

- (1) It is not a monomorphemic or polymorphemic expressions such as a pad or a flop. Similarly, it must not be an inaccurate expression, connective prepositional phrase, an incorporating verb idiom, or even a social formula expression.
- (2) The idiomatic phrase does not correlate with a given grammatical part of speech and requires a multi-word paraphrase.
- (3) VP idioms are not decomposable. Expressed another way, its idiomatic meaning cannot be derived from a compositional analysis of the literal meanings of its constituent parts (single words).
- (4) VP idioms are easily visualized in the mind of the learner by evoking a mental image. This is the underlying reason why they are called vivid.
- (5) VP idioms are conventionalized complex multilexemic phrasal expression which is constructed above word level, thus, they are phrasal.

(6) VP idioms are polysemous and have both a literal and figurative meaning. The literal meaning of VP idioms are not predictable nor can it be logically deduced from the grammatical, syntactic, structural, and semantic character of its constituent elements (single words).

As such, this model affords educators with a comprehensive prospect of different levels of idioms when it comes to learners' L1. In the same vein, Liontas (2002) proposed Conceptual-Semantic Image (CSI) distance which denotes "how close or how distant a target-language idiom is from its equivalent native-language idiom both conceptually (i.e., in terms of the picture it evokes) and semantically (i.e., in terms of the literal meanings of its words)." He states that the paramount purpose of this continuum is not to offer a definite taxonomy. Nonetheless, its purpose is to contribute to exploring the significance and implications of VP idioms. Reiterating this continuum, educators can base their instruction and assessment on the picture the idiom evokes as well as the distance between the target-language idiom and its equivalent in the students' L1. Knowing the L1 of learners, this model can facilitate the process of idiomatization. In this regard, exposure to the idiom, authentic material, and practice can aid idiomatization process. Educators can thereby assess VP idioms through pictures that the idiom evoke. Picture matching is an innovative task, which can be completed through paper-based or digital material.

CSI distance coupled with VP idioms provide educators with a comprehensive understanding of what a learner goes through to arrive at the figurative meaning of an idiomatic phrase (VP phrasal idioms). In other words, what learners need to be provided with, so they fully understand the figurative meaning of an idiomatic phrase. Table 1. Summarizes the three levels of idioms besides the image they evoke and the role of context for each level. Finally, assessment types are proposed based upon the level of idioms in accordance with diffusion model. This is, however, not to say that other idiom processing models are not working for idiom assessment.

Table 1. Summary of the Lexical Levels

Level	Words in L1 and L2	Image	Context	Assessment type
lexical	The same	The same	Not needed	Idiom detection, picture matching, fill in the blank, translation
semi-lexical	One or more lexical items in L2	Still possible to detect	Some context is useful	Idiom detection, multiple choice items, comparison, translation
post-lexical	It does not exist in L1	Totally different	Learners heavily rely on context	Fill in the blanks while the context is provided, translation

English language learners are already interested in idioms. Liontas (1999) conducted a mixed method study and the results of the study imply that learners would prefer idioms as an integral part of the curriculum in an authentic context. Accordingly, Educators need to design and/or employ the material that befits L2 learners. According to Liontas (1999), the development of idiomatic competence is construed as the learners' move from the Declarative Stage (declarative idiomatic knowledge) through the Associative Stage (controlled idiomatic knowledge) to the Autonomous Stage (automatic idiomatic knowledge). Expressed another way, learners need to move from zero-control stage through partial-control stage to full-control stage. To achieve automatic idiomatic knowledge (To reach full control), learners are required to from declarative automatic knowledge to controlled and eventually to automatic idiomatic knowledge. It is, however, imperative for learners to primarily achieve a fair degree of proceduralization to obtain full autonomy. For proceduralization to happen, continuous exposure and practice is a sine quo none. The end goal is to develop a multifaceted idiomatic knowledge to be effectively employed in both comprehension and production of idioms with minimum effort. In short, idiomatization is

"this proceduralization move from the declarative through the associative to the autonomous stage is seen as the process of idiomatization" (Liontas, 1999, p.7). The process of idiomatization is equated with becoming idiomatized to the target culture. In other words, the process of idiomatization is equal to the degree of idiomatic competence acquired. Accordingly, educators need to design idiom assessment tasks based on the level of the students. Lower level students should be assessed on their declarative stage. Learners then—as they move to the intermediate level—should be tested if they have experienced a fair degree of proceduralization. Finally, learners should be tested on actual use of idioms in context both appropriately and accurately.

Idiom Detection Exercises

Liontas (1999) included 60 adults from third-year university foreign language learners. 30 students of Spanish, 15 French, and 15 German participated in the study. A total number of 90 VP idioms were used in an idiom detection task. The participants were asked to write a brief report on the process of this idiom identification and interpretation. The results revealed that L2 learners could successfully detect VP idioms (86.33%). In addition, in the absence of context LL (75.23%) idioms are comprehended far easier than SLL (43.73%) and PLL (25.44%) idioms. Finally, the results suggested that the increased context apparently aid comprehension and interpretation process of all VP idioms. The results of the qualitative analysis confirmed that students would prefer idioms as an integral part of their language and culture learning in an authentic context.

L2 learners in lower levels might not be able to recognize idioms, let alone appropriately using them in context. In this regard, the first step is to detect idioms. Later on, teachers can develop idiomatic knowledge of learners in productive skills (speaking and writing) based on their learning outcome and gains in receptive skills. No matter how you design the tasks, it is advisable to include idiom detection long before you assess learners on the usage of idioms in context. It is, however, noteworthy that tasks are appropriate and important form of idiom assessment. Through tasks, learners familiarize themselves with their role, context, register, and the purpose of communication. Tasks, if effectively designed and integrated, can and should improve the idiomatic competence of learners to a large extent.

Task-Based Approach

One of the most practical ways of assessing idiomatic competence of L2 learners is assigning tasks. L2 learners can show their competence of idiomatic expressions including the ones learned in class as well as their prior knowledge via tasks. Needless to say that each task requires a rubric to grade students. The following rubric can help teachers to grade students' idiomatic performance. Additionally, educators can tailor the rubric or alternatively design a new rubric based on the students and their needs.

Vocabulary is normally assessed at the word, sentence, and discourse levels. It is imperative for educators to assess idiomatic phrases at all three different levels. To make sure students know the constituent parts of an idiom, they should be assessed at the word level. For instance, kick the bucket is an idiomatic phrase, which is equal to die. It functions as a verb in a sentence. However, at the discourse level, it is informal and derogatory.

Table 2.

	1	2	3	4	5
clarity of expression					
pronunciation					
comprehensibility					
Speed					
hesitations					
intonation rhythm					
facial expressions					
eye contact					
clarity of meaning					
vocabulary					
Phrases					
grammar					
Overall					

To follow the three levels of assessment for idioms, teachers primarily need to make sure that students can recognize a phrase as an idiom. To achieve that, teachers can highlight or underline idioms during reading sessions. They can also have students recognize or guess them in groups. Teachers then should assure that students know the component parts of idioms. As an illustration, do my students know the meaning of bucket in “kick the bucket”? If yes, they can move on to the next level, which is the sentence level. At this level, teachers need to check students’ understanding of the figurative meaning of the idioms. This can be implemented through simple objective tests. Finally, students need to be tested at the discourse level. *Kick the bucket* is not a formal idiom and they cannot use it as a formal register. Teachers can provide students with the required context to determine if they know the register of the idiomatic phrases or not. The following table should be made for every idiom before assessing it.

Idiom	components	Sentence level	Discourse level
Kick the bucket	Kick, bucket	Die, verb	Informal/derogatory

One of the most effective tasks is designing dialogues where language learners are required to utilize idioms both appropriately (discourse wise) and accurately (grammatically). As for lower levels, educators may need to supply students with the list of idioms with which they need to complete the dialogues.

Portfolio Assessment

More often than not, educators complain that L2 learners either do not know idiomatic phrases or are unaware of where and how to appropriately use them. Hornby (2006) explains portfolio as “a collection of photographs, drawings, etc. that you use as an example of your work, especially when applying for a job” (p. 1172). Similarly, Richards and Schmidt (2002) argued that a portfolio is characterized as a purposeful collection of artifacts to portray a person’s efforts, progress, and achievement. Due to the affordances of portfolio, educators can harness them as a learning or assessment tool. The main features of portfolio which make it unique are as follows:

- A learner has the final decision to save a work in his portfolio (learner-centered).
- It is viable for a learner to revise his portfolio based on the feedback received from the teacher or peers.

- Learners assess and reflect on their portfolio. Accordingly, learners are aware of their progress and academic gains.
- A portfolio can be taken into account as the mastery of idioms by teachers and learners.
- A portfolio can encompass different modes of learning such as audio, video, and written works.

Portfolio keeping consists of several benefits such as self-assessment, peer-assessment, and teacher feedback and/or assessment. In this way, a learner utilizes metacognition and self-regulate his progress based on his needs. Teachers must introduce portfolio to their students so they can exploit its benefits. Notwithstanding the type of the portfolio (audio, video, or written), learners can accumulate idioms in context. Students then use them either in their writing or speaking. These outputs can be given to peers and finally the teacher to receive feedback. Learners can revise their works based on the feedback received and put the final work in their portfolio.

The Discrete-Point Approach

Objective assessment can be considered as an integral part of the discrete-point approach in language education. According to discrete-point approach, learners primarily focus on their knowledge of individual words. There are multiple objective test items such as multiple-choice, matching, picture labeling, blank-filling, and translation. Many educators employ the same approach in assessing idiomatic phrases. However, there are models that attend to the processing of literal meaning of the components of idiomatic phrases. In this sense, if teachers assess learners through objective tests, they place less or no emphasis on many other aspects of idioms. Instead, the ability assessed is association of one idiom to its figurative meaning regardless of the image it evokes in the students' first language (L1) and the context in which it can be used. In contrast to L1 learners, L2 learners create L2 idiomatic meaning through comparison and contrast with their L1 idiomatic knowledge. Learners' personal background, familiarity with L1 idioms, and making connections between L1 and L2 idioms play a pivotal role in detecting and creating L2 idiomatic meaning.

Conclusions

This article detailed the notion of idiomaticity, presented Idiom Diffusion Model, and highlighted several assessment techniques in context. Studying idiomaticity in language education has been a long-standing interest for both linguists and psycholinguists and, to date, multiple aspects of idioms have been examined. However, idiom assessment appears to be under-researched. It then seems that idiom assessment in language education is an oft-neglected topic deserving more attention. This article then sheds light on the prominent assessment techniques tied to idioms. From the outset of the article, nonetheless, the author mentioned that this article solely seeks to present several assessment techniques, which can be effectively harnessed in terms of idioms. This is, however, not to say that educators are not able to design techniques off the cuff. It is hoped that this article can facilitate the idiom assessment process for educators.

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Part 2: Curriculum and Instruction Development

Building Community Using Experiential Education With Elementary Preservice Teachers in a Social Studies Methodology Course

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Abstract

There is urgency for teacher educators to instruct preservice teachers in the tenants of social justice education. This urgency is based upon the American demographic landscape and the responsibility of educators to teach for social justice. Preservice teachers report feeling inadequately prepared to educate for social justice when entering the classroom setting. Feelings of incompetence in social justice teaching expressed among preservice teachers coupled with minimal examination in the literature of the effects of teacher education practices that aid in the readiness to teach for social justice provided the foundation for this study. This study examined experiential methodologies that can prepare preservice teachers to teach for social justice, particularly within a social studies context. The study focused on two research questions: (1) How do preservice elementary teachers in a social studies methods course conceptualize teaching for social justice within an experiential framework? (2) In what ways did preservice teachers operationalize teaching for social justice in the practicum classroom? Also examined was how development of community in a social studies methodology course fostered the understanding of teaching for social justice. The findings highlight preservice teachers were able to conceptualize building communities with experiential methods to teach for social justice and how doing so created an effective learning community. Although the preservice teachers valued the implementation of experiential methods to foster the teaching of social justice, difficulties were expressed in their incorporation of experiential methods in the practicum environment due to a lack of confidence, teaching competence or collegial support.

Keywords: case-study, qualitative, teacher education

Introduction

Preservice teachers report feeling inadequately prepared to teach for social justice within the classroom setting (Dover, 2013, McDonald, 2005; Picower, 2012; Storms, 2012; Ukpokodu, 2007). Researchers believe one potential cause for these feelings of inadequacy is because students in teacher preparation lack the requisite skills to teach for social justice, thereby, resulting in a lack of ability to create educative social justice opportunities in the classroom (Cochran-Smith, 2004; McDonald, 2005).

Teacher educators should not be latent nor simply wait for teaching for social justice skills to just develop on their own within preservice teachers. Nieto (2000) writes about the “sluggish pace” with which teacher education programs approach teaching for social justice with preservice teachers, in spite of the rapidly changing demographics of the student population in public schools. The problem of fully incorporating social justice opportunities into classrooms across the U.S. is larger than the individual student or professor. Within the education community, there has been minimal examination of how preservice teachers transfer social justice theory into actual pedagogical practice (Dover, 2013; McDonald, 2005; Villegas, 2007). The lack of analysis on the

transfer of skills to teach for social justice is an utmost concern for teacher educators because of the ever-growing identification of the disconnect between preservice teacher preparation and effective concrete pedagogical practices (Dover, 2013; McDonald, 2005).

However, the use of experiential education can be a flexible pedagogical tool in teaching for social justice with preservice teachers (Moore, 2008). Experiential education activities can create an environment that provides opportunities to build both trust and a sense of community (Carver, 1996; Obenchain & Ives, 2006). Trust and community are two elements critical to teaching for social justice in classrooms (Picower, 2012). Strengthening classroom communities, through the use of experiential methods, impels students to delve into social justice ideology in an atmosphere of trust (Picower, 2012).

Particularly, social studies methods taught within an experiential framework can be an exceptional tool to build skills to teach for social justice in preservice elementary teachers, because it can connect historical content and real-world experience (Brawdy, 2004; Carver, 1996). Experiential activities can mirror the unexpected problems that individuals face (current and past) in real life settings that must be dealt with using innovation and creative problem solving (Carver, 1996; Smith, Strand, & Bunting, 2002). This is the value of teaching and learning in this way; students are absorbed in purposeful activities that put acquired knowledge to use. Stevenson (1990) illustrated this claim with authentic feedback from students, who stated they are most engaged in subject matter when it is related to real-world experiences as well as instruction that enabled them to participate in thinking and learning actively.

Literature Review

D. A. Kolb (1984), a pioneer in experiential learning theory (ELT), explained that an educator's job is to create opportunities for students to actively engage and reflect on their growth as both individuals and members of a learning community. This learning process begins by bringing out the learner's beliefs and theories, examining and testing them, and then integrating the new and more refined ideas into the learner's belief systems within a given community. Following this cycle, a more meaningful learning process is facilitated (D. A. Kolb, 1984). Understanding an individual's beliefs and perspectives are central to social justice teacher education (Cochran-Smith et al., 2009; Villegas, 2007) and a critical link to ELT. It is through the experiential learning process that preservice teachers will be able to build their skills to teach for social justice and gauge whether or not they will use their newly acquired knowledge in the classroom setting.

Teaching individuals to work together was extremely vital in forming the foundation for this research study because the study was based on cultivating the elements of teaching for social justice within a community of learners, specifically preservice teachers. Kohlberg (1969) wrote of the concept of "just communities", in which the behavior of the individuals is raised to a higher level by their affiliation with the group. The values and norms necessary for groups to function safely and efficiently in experiential activities have an abundant potential to create this "just community". The necessity for people to get along, share resources, be concerned with the welfare of other participants, and view their personal behavior in the context of the group, helps create conditions for a "just community" (Garvey, 2002; Kohlberg, 1969) and is a critical link to social studies education (NCSS, 2010).

Several themes emerged in the literature review, specifically the importance of developing a classroom community and the need for active participation in the learning process to successfully

teach for social justice. Coupled with these overarching themes, the review process revealed distinct gaps in the literature. An absence of literature examining the effects of focused experiential methodologies to cultivate the ability to teach social justice with preservice teachers; specifically, in a social studies context was evident. Therefore, grounding this study in Experiential Learning Theory (Carver, 1996; D. A. Kolb, 1984) and Social Justice Teacher Education (Dover, 2013; Picower, 2012; Storms, 2012) was essential to adequately examine community and active participation in the learning process as well as address the identified gap between utilization of experiential methodologies and promotion of teaching for social justice in among preservice teachers.

Methods

This qualitative case study (Creswell, 2013; Stake, 2005) examined experiential methodology that can prepare preservice elementary teachers to teach for social justice, particularly within an elementary social studies context. Specifically, the study focused on two primary research questions: (1) How do preservice elementary teachers in a social studies methods course conceptualize teaching for social justice within an experiential framework? (2) In what ways did preservice teachers operationalize teaching for social justice in the practicum classroom? Also examined was how development of community in an elementary social studies methodology course fostered the understanding of teaching for social justice among preservice teachers.

As the research questions state, the goal of this study was to document and examine the individual, collective, personal, and professional experiences of seven preservice teachers as they conceptualized how to operationalize a social justice learning community built with experiential methods. In this learning community, participants explored the intersectionality of identity and investigated power, privilege, and oppression to acquire teaching for social justice skills. Atkinson and Hammersley (1994) note that social justice research “has been directed toward contributing to disciplinary knowledge rather than toward solving practical problems” (p. 253). To make the research applicable to reality, instructional tools were created and activities aligned to the research questions as a starting point for learning to teach for social justice in teacher preparation programs.

The research study was designed, conducted, and implemented by the instructor as teacher-as-researcher. In this role, there is an ability to have an “inside view.” And have a chance to live the life of the sample group as a member and a researcher. This insight provided the ability to connect the research to the larger picture of the program as a whole as well as its societal context (Denzin & Lincoln, 2008).

To look at how students operationalize and conceptualize their ability to teach for social justice experientially on a programmatic level, their transfer of learning to the practicum setting was explored. Forming a distinct community within an elementary social studies methodology course on the university level was the first step to demonstrate how experiential methods can provide gateway to teach for social justice in an attempt to encourage the practices of preservice teachers to teach for social justice.

Sample

This study was conducted at a large university in the western U.S. based within the Teacher Education Department over the course of one traditional semester. Students were purposefully selected based on their enrollment in an Elementary Studies Methods Course. Twenty-two students

were enrolled in the course and seven were chosen based on their interest and consent to participate in the study as well as the demographics each individual brought to the sample. The preservice teachers ranged in educational experiences, majors/endorsements, and age. The sample was representative, in relation to gender and age, of the overall population of students enrolled within the Teacher Education Program at the University, which is primarily, Caucasian, female, and aged 18 to 24. This sample is typical to other teacher education programs in Utah, but would not be considered a diverse program compared to other teacher education programs in the U.S. All students were in their final year of their teacher education program, a semester or two before student teaching. The class met weekly for approximately 2-6 hours over a period of 9 weeks; and after this time, students were in a practicum classroom for 4 weeks.

All of the preservice teachers involved in the study were female and prepared to teach at elementary grade levels within public schools (see Table 1). All but one of the participants, who was in her thirties, was a traditional aged college student (age 18-24). Six of the participants had been enrolled at the same university for their entire collegiate experience. One student transferred from another institution. Sixty percent of the preservice teachers did not have a secondary endorsement area outside of elementary education. Two were pursuing a math endorsement, one special education and one early childhood. These supplemental endorsements provided an added lens for the preservice teachers to experience their coursework and practicum assignment.

Table 1. Participant Overview

Participant	Major/endorsement area	Student status
Nicole	Elementary Education/Social Studies emphasis	Nontraditional
Megan	Elementary Education/Special Education	Traditional
Mellaina	Elementary Education/Math Endorsement	Traditional/transfer
Hayli	Elementary Education	Traditional
Casey	Early Childhood/Elementary Education	Traditional/primary residence out of state
Angie	Elementary Education	Traditional
Adrienne	Elementary Education/Math Endorsement	Traditional

Data Collection

Morine-Dershimer and Corrigan (1997) suggest four conditions should be created in order to facilitate change in an individual: time, dialogue, practice, and support. These four conditions were present in this study in that the preservice teachers spent nine weeks in class learning methods to weave social justice principles into social studies content and then provided four weeks of practice and support in their practicum classrooms to implement learned methods. Throughout the semester, students participated in a variety of social studies teaching methods (i.e. inquiry lesson plans, problem-based learning, case studies, Socratic dialogue), class discussions on teaching for social justice as well as reading applicable theory and research studies in effort to build curricular knowledge in relation to the role social justice plays in social studies education.

Experiences were facilitated that promoted preservice elementary teachers seeing themselves as social reformers and developing a commitment to the reconstruction of society through the redistribution of power and other resources (Grant & Sleeter, 1997). For example, activities focused on “social action skills, the promotion of cultural pluralism, and the analysis of oppression with the intent of eventually taking action to work for a more democratic society” (Jenks et al., 2001, p.99). I distinctly implemented and modeled the use of experiential education methods (i.e. team building activities, outdoor education, problem-based learning) to foster classroom community under the framework of Carver’s (1996) theory of experiential education coupled with

Adams, Bell, and Griffin (2007) pedagogical dilemmas in my lesson planning and implementation of course content.

Data were principally derived from class assignments, interviews, discussions, observer notes, logs, and weekly journal reflections. The conversations and reflections with the entire class were recorded digitally. Field notes, observations, and digital recordings were written down as narrations and analyzed. Table 3 outlines the research questions and data sources used to answer each question.

Table 2. Correlation of Research Questions to Data Collection Methods

<i>Research question</i>	<i>Data collection method</i>
<i>How do preservice elementary teachers in a social studies methods course conceptualize teaching for social justice within an experiential framework?</i>	Weekly Quick Writes-specific questions/prompts Little Books Textbook Evaluation Field Notes Audio Recordings Interviews
<i>How does developing community in an elementary social studies methods course develop/foster preservice teachers understanding of teaching for social justice?</i>	Weekly Quick Writes-specific questions/prompts Little Books Field Notes Audio Recordings Interview
<i>In what ways did preservice teachers operationalize teaching for social justice in the practicum classroom?</i>	Lesson Plan Delivery and Written Reflection Audio Recordings Field Notes Interview

To connect teaching for social justice, social studies methodology, and teacher education in this study, the data sources were coded for emerging themes by implementing a series of data analysis techniques (Creswell, 2013; Krippendorff, 2004; Strauss & Corbin, 1998). Data, through deductive analysis, was analyzed by reducing codes to themes and from there pinpointing patterned regularities in the data (Stake, 1995). Categories were related to my conceptual framework based on the literature. Each data source was viewed as one piece of a puzzle, each piece adding to my comprehension of the study and its findings. This confluence of data sources added strength to the interpretation of the findings as various strands of data were woven together to construct a full picture of the case (Baxter & Jack, 2008).

Findings

Data, which was contained in the participants' reflective journals, end of term interviews, my researcher reflective logs and purposeful classroom assignments, revealed three main findings.

1. The preservice teachers in the methodology course increased their agency and competence to deliver experiential lessons to teach for social justice, through engagement and education in experiential methods within their university methods course. However, the preservice teachers were not able to sustain their agency or bolster their competence to deliver experiential lessons within the practicum.
2. The methodology class became a learning community through experiential methods that fostered the development of interpersonal relationships among the students, which created a strong

sense of belonging among their peers in class, which helped to form the foundation to teach for social justice.

3. Preservice teachers recognized that their desire for professional acceptance and belonging from their practicum colleagues was heavily influenced by collegial cooperation and support in the practicum setting, and when lacking, stifled their ability to implement experiential methods to teach for social justice, reshaping their agency and competence.

Carver's (1996) ABC's of student experience—Agency, Belonging and Competence, provided a lens by which to analyze the preservice teacher's conceptualization and operationalization of experiential learning for the teaching of social justice. Carver (1996) recommends using her framework as a tool for development of agency, belonging and competence. As the course instructor, I utilized this framework so that students would develop the skills, habits, memories and knowledge that would enable them to teach for social justice. My aim was not only to build their skill base, but also meet their need to belong through the creation of a vibrant learning community.

However, the experiential methodology, skills and knowledge they had gained in their course preparation, was stifled when they entered the practicum, because their desire to belong to the practicum community became paramount. To fully develop agency and competence to replicate the methodology skills gained from the course, the preservice teachers needed consistent collegial support and modeling, which did not occur for the majority of students in this study.

Experiential education methodologies have the potential to be used as a tool to create learning communities in order to enhance the ability to teach for social justice. In this specific research study, practicum students underwent a transformative, communal growth experience within a methodology class where a sense of belonging was created. Time was spent discussing frameworks behind experiential methods with the anticipated goal that students would develop the skills to form a learning community and build their competence with innovative methods to teach for social justice.

However, the preservice teachers were met with challenges, such as time constraints, diminished competence, limited professional agency, and lack of support from colleagues, which impeded the full actualization of this goal. Teacher education programs can address these challenges through the allocation of substantial time and resources to develop both the preservice teacher and cooperating teacher's experiential methodology skills within the practicum classroom, ensure that opportunities frequently exist to dialogue about learning outcomes with colleagues, embed multiple chances in the curriculum to practice new skills in the practicum setting and lastly, but most important regularly assess the amount of collegial support provided to preservice teachers to apply new innovative methodologies for the transfer of learning from university coursework to the practicum environment.

In spite of feelings of doubt and challenges in the practicum classroom, the preservice teachers in this study revealed their commitment to using experiential methods, the desire to build learning communities and the potential ability to teach for social justice. Thus, the findings of this study suggest an elementary social studies methods course, which includes experiential theoretical concepts and perspectives, can help students conceptualize their role as educators in building learning communities and ultimately enhance their agency to operationalize teaching for social justice in future classrooms if given adequate university and collegial support.

Conclusions

All too often, preservice teachers enter into schools with limited ability to create a classroom environment open to dialogue on critical social justice issues (Ukpokodu, 2007). The education profession must explore how best to apply experiential education methodology to build learning communities to teach for social justice. By doing so, educators can provide students a safe, trusting atmosphere to creatively problem-solve, think critically and learn the skills to dialogue about complex social issues openly. The inherent value of experiential education is not merely a novel way to teach or present material or to have fun, but to foster trust and community to teach for social justice.

Data analyzed from this study suggested experiential education infused into a social studies methodology course could provide a strategy to build group cohesion, trust, and a sense of community, which can cultivate the ability to teach for social justice with preservice teachers. However, the data showed the preservice teachers needed substantial time to practice newly acquired skills in a supportive, communal atmosphere. Because the preservice teachers desire for professional acceptance in the practicum environment was paramount, they did not gain the agency or competence to implement experiential lessons to teach for social justice fully.

The following strategies be employed to create learning communities experientially to teach for social justice:

- Set norms with the class by students actively participating in the process (i.e. full value contract) from the onset of the course and revisit norms often.
- Continually model strategies to debrief experiential activities in order to achieve social justice outcomes.
- Frequently revisit the students' definitions of social justice and experiential learning to gauge growth or the need for clarification or re-teaching.
- Ensure a university presence throughout the practicum to provide guidance and support to the preservice and cooperating teacher.
- Practicum experiences should be embedded throughout the semester, not just during the final weeks of a course or random visits scheduled.
- Consistency in practicum expectations and substantial time allocated to teaching a variety of methods are critical for optimal growth.
- Create partnerships with practicum sites that embrace innovative methodologies and the tenants of teaching for social justice.
- Structure professional development for cooperating teachers with a focus on supporting preservice teachers with building agency, gaining professional acceptance and teaching for social justice.

This case study has raised additional questions for teacher education programs about the integration of experiential education, learning communities and teaching for social justice in coursework and program components. The present study was limited as the sample group was drawn from one course at one University with preservice teachers working within a similar context. Further inquiry would benefit from a broad analysis of the infusion of experiential methodology and teaching for social justice across a diverse demographic of teacher education programs. It is also important to emphasize; this case study relied heavily on self-report data gathered from the preservice teachers. Future studies need to include observations of practicum teaching in order to

ascertain what preservice teachers actually demonstrate. Lastly, employing a longitudinal mixed methods design would help teacher educators to understand how the variables of experiential learning, learning communities and social justice interplay with each other in the development of teachers over time.

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Marrying the Pecha Kucha With Graphic Organizers as a Summative Assessment

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Abstract

The combination of multimedia learning with graphic organizers can reduce cognitive load. The researcher shares an innovative way of teaching and learning with a specific multimedia presentation format, pecha kucha, in harmony with graphic organizers. The researcher used the mixture of multimedia learning and graphic organizers to create a summative assessment that decreased extraneous processing for students. Findings from the lesson suggest an engaging way to include technology as a summative assessment outside of a written test. Future investigations may examine the summative assessment's success in a classroom with students with learning disabilities in the middle and secondary school grades.

Keywords: multimedia learning, cognitive load

Introduction

In today's classrooms and those of yesteryear, teaching at any level includes some sort of assessment – formative or summative. The audible groans and omnipresent anxieties that surround assessments are constant reminders to teachers of how students think and feel about assessments. As a student, the researcher recalls his voice as part of the pained assessed. With the rapid growth in educational technology, it is possible to ease students' cognitive load and provide clarity to instruction with such assignments as a pecha kucha (PechaKucha, 2017). A pecha kucha is a multimedia presentation format that includes 20 visual slides (e.g., PowerPoint or Keynote) with each slide displayed for 20 seconds. In the researcher's experience, the pecha kucha is encouraged to include only one image per slide, no text. The presentation is a total of six minutes and forty seconds with images and an oral presentation. The succinct format requires the presentation to be focused and deeply organized.

The pecha kucha continues to garner international appeal as a motivational, fun (Beyer, 2011; Tomsett & Shaw, 2014), and effective (Dredger & Beach, 2016) presentation format. Beyer's (2011) research noted that the pecha kucha is considered higher in presentation quality compared to a PowerPoint presentation. In addition to its potential in academic settings, there are Pecha Kucha Nights throughout the world (see <http://www.pechakucha.org/global>) where people present a pecha kucha centered on a particular topic or theme.

There are many examples of pecha kuchas available on the Internet. A digital library of pecha kuchas on a variety of topics can be found at: <http://www.pechakucha.org/watch>. One exemplar included in the aforementioned digital library is titled "The Art and Science of Craft Confectionery" (see <http://www.pechakucha.org/presentations/the-art-and-science-of-craft-confectionery>) and it takes the audience through the scientific process and creation of delectable sweets. As the pecha kucha unfolds, the audience is provided visuals of essential aspects of creating sweet treats. Visuals that compare and contrast important points or highlight certain

things, like the role of glucose in craft confectionery work, illustrate the relationship of visuals and the oral presentation in a pecha kucha.

In the Spring of 2011, the researcher was in a doctoral course titled “Creativity.” As anticipated at the conclusion of a unit of study or course, the professor used a summative assessment to evaluate learning. The summative assessment required the researcher to create a pecha kucha on a topic explored in the course. Prior to the course, the researcher was accustomed to writing a final paper, giving an oral presentation, or taking a written examination as the final evaluation of learning. This time it was different. The researcher had to think of a topic that he learned about in the course and create a multimedia presentation that would sufficiently permit him to pass the course.

The researcher’s brain switched to immediate cognitive overload. He decided to create a pecha kucha that examined the connection of deliberate practice to performance anxiety. He had recently welcomed a puppy into his home; therefore, he thought connecting his lived experiences with a new pet to the course content would make it easier to create a personalized approach to presenting about deliberate practice and performance anxiety. He titled his pecha kucha: “A lesson from my dog: Bridging deliberate practice to performance anxiety.”

The researcher found value through his personal experience with creating a pecha kucha. It was not until he adopted the pecha kucha assignment as a summative assessment for the courses he teaches that he fully understood the science of learning and instruction as it applies to the use of multimedia. With further research about multimedia learning and responding to student feedback, the pecha kucha summative assessment has developed into a positive way of teaching and learning with technology. It was through the researcher’s lived experience with creating a scholarly presentation in a pecha kucha format that he realized further scaffolding would be necessary if he were to include a pecha kucha assignment in the courses he teaches.

Literature Review

Researchers (Tomsett & Shaw, 2014; Beyer, 2011) note that providing presentation tips to people interested in creating a pecha kucha can improve their experience in creating a pecha kucha. Tomsett and Shaw’s (2014) work in an East Asian-based university, for example, had students create a pecha kucha to illustrate their understanding of a business term. Speaking tips and oral presentation classroom exercises prepared students for their pecha kucha presentation. Dredger and Beach (2016) asserted that the visuals in a pecha kucha confirm the oral presentation, but the marriage between the visual and the oral presentation requires practice. Presentation tips may help construct the necessary bridge between the visuals and oral presentation to produce a clear and impactful pecha kucha with a focused message to the audience (Beyer, 2011).

This article provides an innovative way to teach with technology, specifically in regard to using multimedia learning as a summative assessment. The researcher first shares his personal connection to the topic. Next, he shares literature on the connectedness of multimedia learning, cognitive load, and graphic organizers. He describes using the pecha kucha as an innovative way of teaching with technology. He ends the article with reflections on what he learned from using pecha kuchas in his teaching.

The purpose of this article is to share an innovative way of teaching with technology that is grounded in marrying multimedia learning, graphic organizers, and cognitive load. The researcher has used pecha kuchas in his classrooms with fourth grade students, undergraduate college

students, teacher credential candidates, and graduate students. It is the researcher's hope that, provided the appropriate scaffolding in this article, educators will explore using pecha kuchas in their classrooms to reduce extraneous cognitive processing and increase student engagement in summative assessment.

In the researcher's personal experience of creating a pecha kucha, he realized that there was a benefit to preparing a presentation with mostly photographs and little, if any, text. The researcher's intent was for the audience to focus on what he said instead of trying to simultaneously read text and listen to his presentation. Leopold, Doerner, Leutner, and Dutke (2015) described this benefit as a multimedia effect where presentations with text and photos provided an advantage over text-only presentations. Other researchers (Carlson, Chandler, & Sweller, 2003; Leahy, Chandler, & Sweller, 2003; Leahy & Sweller, 2005; Mayer, 2008) explained advantages and disadvantages of presentation formats in regard to cognitive load, particularly in terms of instructional format. Leahy and Sweller (2005) suggested that instructional formats may ignore student cognitive activities during presentations and require a substantial cognitive load. The use of multimedia as a strategy to teach and learn, therefore, needs to be carefully considered both in design and delivery to be effective in the classroom.

When considering multimedia as an instructional strategy, it is important to consider to what extent multimedia instruction assists the student in achieving the expected learning outcome. Mayer (2008) suggested that multimedia instruction can reduce extraneous processing; therefore, lifting students to attain the desired learning outcome. Mayer (2008) stated that multimedia as an instructional strategy can decrease extraneous processing in five ways:

- Diminish extraneous material
- Underscore important material
- No text for orally presented material with projected, on-screen visual
- If there are words projected, on-screen, then the words should be next to a related graphic
- Present oral presentation and projected, on-screen visual at the same time

Adding text, however, with a projected, on-screen visual can create extraneous processing (Mayer, 2008). The student is charged with taking in information from the visual and the text at the same time. If the teacher is speaking and showing a presentation slide with a visual and text, then the situation is compounded even further with three waves of information to reconcile (verbal, visual, and text). The student is forced to split their attention between the three waves of information because they cannot read the text, look at the visual, and listen to the teacher all at the same time. The student must provide attention to the text, then switch their attention to the visual or the oral presentation. Fenesi, Kramer, and Kim (2016) echoed Mayer's (2008) claims and suggested that removing text from on-screen projections and presenting only an image with the oral presentation results in greater learning. As a multimedia instructional tool, the pecha kucha captures the aforementioned recommendations.

Reviewing the literature about multimedia instruction and learning informed the researcher's understanding about the potential role the pecha kucha format could have in his classroom. With his personal experience in creating a pecha kucha in mind, he implemented the presentation format in his class. He felt that the innovative format would inspire his students to unleash their creativity and help them prepare a focused presentation. It was met with student anxiety and frustration. He quickly learned from his students that the innovative format lacked the necessary scaffolding for

a successful way of teaching and learning with technology. During his re-evaluation of the pecha kucha format, it occurred to him that the highly-structured nature of the format perhaps needed to be broken down into smaller chunks. By assigning the pecha kucha presentation to his students without the necessary support, he had accomplished exactly what he hoped to avoid: high cognitive load.

The researcher turned his attention to graphic organizers research and how he might marry graphic organizers with cognitive load and multimedia teaching and learning. Meltzer, Sales Pollica, and Barzillai's (2007) research examined the role of strategy instruction in a classroom learning context. Meltzer et al. (2007) argued that it is necessary to assess student learning; however, the student must understand the strategy that is used in the assessment. For instance, if an assessment requests that a student uses a decision tree to justify their response, then it is expected that the student knows how to use a decision tree. The researcher's students may have been excited about the pecha kucha presentation format, but they did not understand the necessary steps to create a pecha kucha. Stull and Mayer (2007) argued that the concept of learn by doing can create too much extraneous processing; therefore, limiting engagement in generative processing. Thus, without the proper mechanisms in place to scaffold the teaching and learning with the pecha kucha format, the students potentially had a high amount of extraneous processing which led to their anxiety and frustration. Once the researcher integrated graphic organizers into the teaching and learning of the pecha kucha multimedia assignment, students excelled and reported a sense of accomplishment and meaningful reflection on their learning.

Methods

A key element to the effective design and implementation of the pecha kucha into classroom teaching and learning is to establish intentional and anticipated steps. Table 1 indicates the six steps the researcher developed along with an abbreviated description and an approximated time frame for implementation that have had repeated student success. As previously mentioned, the pecha kucha assignment is a summative assessment in the courses the researcher teaches. The steps and time frame shared in Table 1 can be modified to fit within the context of a unit of study instead of a longer period of time.

Table 1. Steps and Time Frame of Pecha Kucha Implementation

Step	Description	Time Frame
1	My Strategy Page	Completed at the end of each unit
2	Introduce	1 month before due date
3	Discussion and Mapping Guide	Class session after introduction
4	Practice Session	1 class before the working session
5	Working Session	1 week before pecha kucha due date
6	Present	Last two days of class

Note that the first step ("My Strategy Page") and the third step ("Mapping Guide") are graphic organizers that the researcher developed. Also, the outlined steps only take into account reflection and work done within the classroom setting. Students worked on their pecha kucha for homework and the researcher held regular office hours to be available for additional assistance outside of the normal class time.

As Meltzer et al. (2007) suggested, students must understand the strategy used. For step 1, the researcher designed the "My Strategy Page" (see Figure 1) as a way for students to record their reflections on three specific areas of work: course readings, service learning experiences, and

classroom projects. Course readings entailed any reading completed for homework or in class. Students in this particular course were required to complete 30 hours of service learning (i.e., community service) in a school setting. Classroom projects included any projects the class completed during class time, not for homework. The students were asked to complete the “My Strategy Page” document at different times in the course, especially at the end of a unit of study.

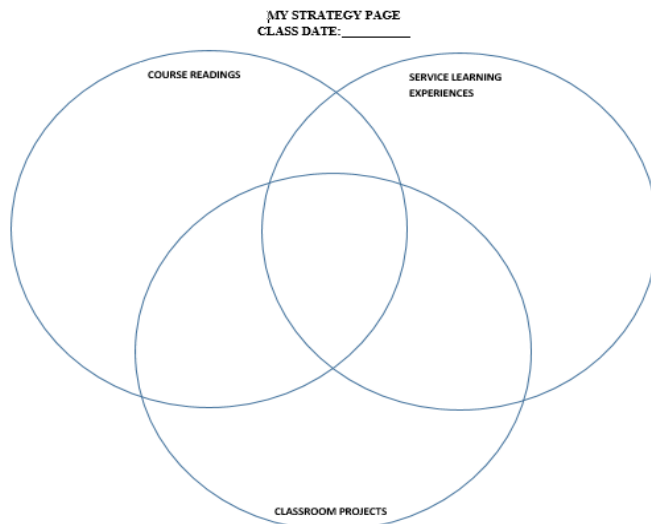


Figure 1. Course readings, service learning experiences, and classroom projects.

The researcher encouraged students to think of connections between the three specific areas on the page with a goal of trying to make at least one connection in each area, including the overlapping sections of the page where similarities between areas should be noted. Students would write, typically in bullet points, nuggets of knowledge they gained in each of the three large circles on the graphic organizer page. The overlapping sections on the graphic organizer were for ideas or concepts that were learned in two areas. For instance, the student read about project-based learning in the assigned course reading and experienced it in a classroom project. These overlapping connections could be helpful in step three of the overall process. Immediately following independent think time to complete the page in class, the researcher led a whole-class discussion about their reflections. Students had the opportunity to add any new ideas or reflections they heard in the whole-class discussion onto their page. Students were informed to keep their strategy pages as they progressed through the course because the collection of pages would help them craft their final project, the pecha kucha.

Step 2 in the pecha kucha assignment is to introduce the details of the assessment. At this point, students have already completed most of their “My Strategy Page” documents. The researcher typically provides the introduction to the summative assessment (i.e., pecha kucha) approximately one month from the expected due date. Throughout the years of fine tuning the assessment based on student feedback, it appears that one month notice provides students enough time to complete the assessment without feeling overwhelmed. On this introductory day, the researcher discusses the structure of a pecha kucha and what is expected of each student. Students are expected to create a pecha kucha that illustrates a theme they learned about throughout the course. Students have presented on a variety of themes including: cooperation, project-based learning, and social justice.

The very next class session is step 3: discussion and mapping guide. It is at this time that the students receive a copy of “My Pecha Kucha Mapping Guide” (see Figure 2). The pecha kucha includes 20 slides presented at 20 seconds per slide. Each square on the mapping guide represents one of the slides for the pecha kucha. Students sketch out the sequence of their pecha kucha using the mapping guide. In other words, the students write bullet points or draw notes in each square of the guide to create a clear and organized presentation. Initially, the researcher did not see value in providing a mapping guide to the students, but the students requested it.

On this day, the researcher discusses with the students how they will present their pecha kucha to the class. The researcher underscores the importance of their presentation being engaging and easy to follow. As Mayer (2008) stated, it is helpful for the presenter to use words like “your” instead of “the” because it creates a conversation between the presenter and the classmates. Students are to review their “My Strategy Page” documents that they completed throughout the semester and decide on a theme that ties their learning together. The researcher does not provide students with a list of potential themes as he has found this limits options for students as they feel the provided list of themes includes the acceptable or praiseworthy options.

MY PECHA KUCHA MAPPING GUIDE

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

Figure 2. My Pecha Kucha mapping guide with planning squares.

Step 4 is the practice session. Students come prepared to share their current progress with their peers and receive feedback. The researcher typically asks that students have at least two slides of content (both image and what they plan to say) prepared for the practice session. This is also the time that four critical pieces of success are discovered:

Students must practice timing their presentation so they can speak about a slide for 20 seconds before the time is up. This ends up being about 50 spoken words per slide.

Students need to slow down their speaking. A common challenge the researcher has noticed is that students must decide on what information is important to retain in their presentation and what information can be removed. A very common practice tends to be that students speed up their speaking voice in an attempt to say everything instead of being more selective about their content and word choice.

Students write down what they plan to say for each slide. The researcher did not require students to create a script for their pecha kucha, but he did recommend it as a tool to consider moving

forward past the planning session. The majority of students choose to write a script to use for their presentation day.

The final pecha kucha presentation should have the slide transitions set to automatically change slides after 20 seconds. Students ask if some slides can be less than 20 seconds. The researcher's answer is always no. It is important to keep the integrity of the structure. However, it is important to note that just because the slide is on the screen for 20 seconds does not mean the presenter needs to speak for the entire 20 seconds. It is acceptable to have a few seconds of silence for the audience to fully digest the content.

Step 5 is the working session and it occurs one week before the pecha kucha assessment is due. As aforementioned, this paper outlines in-class teaching and learning. Thus, the working session provides a space for students to collaborate with the teacher and their classmates in a safe and welcoming environment. The researcher typically finds that students share tips and tricks that they discovered during their pecha kucha journey at this class session.

Step 6 is the pecha kucha presentation. Due to the number of students in the class, the students perform their pecha kucha presentations over two class sessions. It is imperative to plan for technological challenges on the day of the presentation. The researcher has tried having students post their pecha kucha to a class website, save to a cloud in cyberspace, share via email, store on a flash drive, and connect their personal electronic device to a classroom computer. All of these options provide their own challenges. Because of the known and unknown challenges with technology, it is highly advised to leave time for troubleshooting within the presentation time. The most efficient way that has worked for the researcher is to have students create their pecha kucha in Google slides and then share a link to their Google slides with the instructor. Overall, the pecha kucha presentation allows students to share what they learned. Furthermore, the researcher can assess student learning in a way that is meaningful to the student while also building their skills in technology as a tool for presenting.

Conclusions

The researcher learned several lessons from his experiences with pecha kuchas. First, the pecha kucha is a tool that helps build public speaking confidence in students, especially for students where their primary language may not be English. Due to the highly-structured nature of the pecha kucha, the speaker has a set amount of time to articulate their thoughts to an audience.

Second, the pecha kucha can be fully digitized if students wish to audio record their presentation. This has been a favored option for students that do not feel comfortable with public speaking and for students with other performance anxieties. Other researchers (Tomsett & Shaw, 2014; Beyer, 2011) grappled with the concern of students' comfort level. An audio recorded pecha kucha allows the student to spend time reviewing and revising their presentation at home, too.

Third, the researcher learned that technology can be a great asset to teaching and learning, but it can also uncover inequities in terms of accessibility and comfort-level for teachers and students. By including a working session in the sequence of events, it helps address issues of need and concerns.

Finally, as digital natives become ubiquitous, it is important to keep instruction relevant to the students served. The pecha kucha is a summative assessment that might be fully-realized with

minimal technological software. For instance, the researcher taught in an elementary school that served students from low-income families. Access to reliable technology was questionable. However, he modified the assessment so students used pencil and paper to construct a paper-based pecha kucha. In contrast, other technology like Powtoon (www.powtoon.com) can replicate the pecha kucha format with additional graphic design options to keep students engaged.

Marrying multimedia and graphic organizers to reach and teach all students while being aware of cognitive load has provided the researcher's students with experiences that they talk about after leaving the four walls of the classroom. The pecha kucha allows the researcher to assess student learning in a way that celebrates success and encourages students to think creatively and constructively in a 21st century classroom that is ripe with rigor and assessment.

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Part 3: Education in Other Specialties

High Stress and Supreme Satisfaction: A Study of Urban Catholic School Leadership in Three American Cities

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Abstract

Forty urban Catholic school principals located in Baltimore, Indianapolis, or Washington, DC participated in this sequential explanatory design featuring a cross sectional survey followed by participant interviews. Topics included principals' perceptions of their students and schools, their roles as urban Catholic school principals, and their views related to job stress, satisfaction, finances, job complexity, and length of time they view themselves remaining in the profession. Results indicate that most principals experience great stress often and yet are very satisfied with their jobs and their participation in the educational mission of the Church. Participants found highest levels of satisfaction in seeing students experience academic and personal growth.

Keywords: urban education, faith-based school, catholic school, school choice

Introduction

Faith-based schools, especially Catholic schools, have a long history of providing educational opportunities to urban areas across the United States. Given efforts to sustain such schools, as well as renewed political interest in school choice, it is notable that research suggests faith-based schools as a whole have proven to be particularly effective in educating urban students (Baker, 1999; IIG, Massucci, & Cattaro, 2004; Jeynes, 2012) and increasing their chances of graduating from high school and successfully enrolling and completing college (West, 2016).

While schools may differ in terms of their effectiveness, school leadership has been shown in the research to be the main influence on overall school success, and second only to actual teaching as an influence on student achievement (Hays, 2013; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Marzano, Waters, & McNulty, 2005). In many schools, leaders often face issues leading to high levels of stress that can affect job satisfaction, cause burnout, and can ultimately affect their ability to successfully do their work. This has been found to be particularly true in many urban schools, where high leader burnout has been noted for those who must deal with conditions that include very tight budgets, high faculty turnover, and students and families that are often from areas of high poverty (West, Peck, Reitzug, & Crane (2014).

Given that urban faith-based schools have been noted in the literature as effective in producing higher student academic achievement and long-term success as compared with traditional public and charter schools, a study of these schools and how they operate may inform urban education as a whole. In addition, because we know that school principals are among the primary influences in all schools, a study on how urban faith-based school principals perceive their jobs and their challenges informs the quest for better urban education overall.

This research informs the field of education by offering insight into the perspectives of urban Catholic school principals on common issues affecting many school leaders. Catholic schools have been shown to be an effective form of education across cities in the United States, though their

leadership structure has greatly changed over the last fifty years (Caruso, 2012; Defiore, 2012; Hamilton, 2014). As the educational field focuses on the difficulties of improving all urban schools, those in positions of educational research, and policy can benefit from knowing more about leaders from schools that have been noted for their proficiency with urban students. In addition, as we discern the value of faith-based schools as part of the school choice debate, and as we look for answers to the question of what works in urban education, knowledge of the perceptions and perspectives of those who lead urban Catholic schools inform the field as a whole contributes to the discussion.

Specific research questions explored here are:

What are the perceptions of principals working in urban Catholic schools regarding their schools, their jobs, and their roles as leaders of faith-based urban schools?

Is there a significant effect between reported levels of stress and reported levels of job satisfaction and/or inclination to leave the profession in the next five years?

What do urban Catholic school principals view as their greatest challenges and enjoyments?

Literature Review

Though options for urban education have most recently focused on the greatly increased availability of urban public charter schools (National Alliance for Public Charter Schools (NAPCS), 2016) a more traditional option has long been available in private and faith-based schools. Historically, some form of religious instruction occupied a central place in the education of almost all colonial-era students from the mid-1600's until the mass founding of public schools centuries later, though religious schools came to dominate the American religious school market after the immigration of large numbers of Irish and German families in the 1800's (Ryan, 1992). Through the years, the prominence of religious schools was gradually replaced by public schools, which were financed through taxation rather than tuition. By the mid-1960's, almost 90% of school age students in the United States were educated through traditional public schools while religious and other private schools were relegated to the periphery of education (Jeynes, 2012).

The most numerous of faith-based schools as associated with a specific religion continue to be Catholic schools (Council for American Private Education (CAPE, 2014). The National Center for Education Statistics (NCES) estimates that in cities across the United States, there are approximately 26,000 urban public schools and approximately 10,000 urban private schools. More than half of the urban private schools, or approximately 6,800, are faith-based, including approximately 2,800 which are identified with Catholic Church sponsorship (IES-NCES, 2012).

Though the number of urban Catholic schools has diminished over the last fifty years as populations have shifted, they continue to operate in urban areas in order to minister to mostly low income, non-Catholic students in need (Defiore, 2012; Hamilton, 2014). In addition, since the early 1990's, coalitions of mostly smaller urban Catholic schools have been opened in order to continue the Church's outreach to inner-cities. Nativity-Miguel Schools, and more recently, Cristo Rey schools, both of which tend to be sponsored by Catholic institutions of higher education or religious communities, continue to open in urban areas across the United States. In addition to the historic Catholic schools that have continued and diocesan sponsored coalitions of urban schools, there are currently around 100 of these newer schools in the United States and the numbers

continue to grow modestly each year (Fenzel & Domingues, 2009). Citing student achievement records that go against urban school trends, in 2003 the Bill and Melinda Gates Foundation and the Cassin Educational Initiative Foundation contributed \$18.9 Million for the expansion of Cristo Rey urban schools across the United States (O’Keefe & Goldschmidt, 2014).

One reason urban faith-based schools garner attention is due to the poor achievement rates that students from low income families have in most traditional public schools and the continued search for what works in urban education (Education Commission of the States, 2016; Dell’Angelo, 2016). An abundance of research and individual experiences have determined that poverty is closely linked with low student achievement (Petrilli & Wright, 2016; Rebell & Wolff, 2012). Still, urban faith-based schools, and urban Catholic schools in particular, have been shown to produce higher achieving students (Brining & Garnett, 2014; IIG, Massucci, & Cattaro, 2004, Jeynes, 2014), and have higher percentages of students who graduate from high school and go on to complete college than their traditional public school counterparts (West, 2016).

In a meta-analysis utilizing ninety articles centered on urban traditional public, charter, and religious schools, William Jeynes (2012) determined that urban religious school students outperform other students in both academic and behavioral dispositions. Specifically, his work indicates that in faith-based schools, students tend to take harder courses, are held to higher expectations, and a smaller achievement gap exists between white and minority students. Such research is not new, however, and echoes to 1982 when noted sociologist James Coleman credited urban Catholic schools for having the necessary structure and discipline to more properly educate urban students (Coleman, Hoffer, & Kilgore, 1981; West, 2016).

While some urban schools may fare better than others, conditions in almost all urban schools has been known to create physical and psychological challenges for staff, and especially school leaders. This is important because school leaders have been shown to be the primary influence in overall school success and second as an influence on student achievement only to actual teaching (Hays, 2013; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Marzano, Waters, & McNulty, 2005). Increased accountability and dealing with budgets that are stretched, while trying to meet student needs, have created atmospheres of unrelenting stress that has become a part of the modern urban principalship in U.S. schools (West, Peck, Reitzug, and Crane, 2014). This stress on school leaders has been strongly linked to burnout that leads to job dissatisfaction and high percentages of leader turnover (Tikkanen, Pyhalto, & Pietarinen, 2017).

While urban Catholic school principals report many of the same affects as public school counterparts, they also value the opportunity to contribute to and support the mission of the Church through teaching and learning (Fraser & Brock, 2006). The Catholic school principal must be a spiritual leader as well as an academic and managerial leader, and in this, they nurture the faith of their communities and foster practices of Christian service (Ciriello, 1990; Ozar, 2010). In situations where school principals report directly to parish pastors, working well with those pastors is also key to job satisfaction, though sometimes this comes in the form of desiring that pastors allow school principals to perform their duties without undue interference. Thus, Catholic school principals report job satisfaction when they have clearly defined roles, employer support, and expectations that are clear and transparent (Durow & Brock, 2004).

In addition to religion and religious support, a common feature that most Catholic school leaders hold by design is autonomy from large central offices and, except in a few cases, teachers’ unions. Advocates attribute such intimate structures as enabling schools to build communities rather than

bureaucracies. Such differences from that of most traditional schools are especially important when it comes to hiring and working with faculty and staff and setting school goals as these have been found to be linked to higher levels of commitment, student engagement, and student achievement (Berends et al, 2009). For example, principals in many traditional public schools and charter schools, often find that they must hire from either pools of candidates derived from other schools that have downsized or accept teachers who are transferred to them by human resource offices (Papa and Baxter, 2008), while Catholic and other faith-based school principals remain free to hire teachers whom they consider of the highest quality. Given that school principal efficacy and job satisfaction have been shown to be related to perceptions of autonomy (Federici (2013); Gawlick, 2008), it follows that principals who work in positions where there is greater autonomy would report significant levels of job satisfaction and task effectiveness.

Methods

A sequential exploratory research design emphasizing quantitative data gathered from participants using a cross-sectional survey that is complemented by qualitative inquiry was employed for this study. In phase 1, data was gathered using an online survey e-mailed directly to principals along with an invitation to participate. In order to clarify and describe the survey results and provide greater understanding, in phase 2, qualitative data was gathered through one-hour telephone interviews with participants. The data used in this research is a portion of the total data that was gathered.

Catholic school principals were identified for potential participation from those located within three American cities in the United States that are known for having high degrees of school choice (DeArmond, Jochim, & Lake, 2014). Responding principals almost evenly represented the three cities with 16 Catholic school principals from Baltimore, 13 from Washington, DC, and 11 from Indianapolis. Of the forty participating principals, 52.63% are female, 82.05% are Caucasian, and exactly half are between the ages of 48 and 66. Most (69.23%) have been at their schools between one and eight years. When asked how many years they have served in the profession of school principal, responses varied, with most indicating 20 years or less. Approximately 18% of participants hold at least a college degree plus some graduate credits, while the vast majority have a master's degree or a masters plus additional graduate courses. Just over 5% hold doctorates.

Given the available research, the author was unable to arrive at an all-encompassing definition for "urban school." A search of the literature determined many defining terms related to how a school might come to be known as "urban," with no one distinctive representation other than that of a city location. It was, therefore, decided to allow participants to decide whether or not their schools are considered urban.

In order to determine and measure school principals' perceptions, the MetLife Survey of the American Teacher: Challenges for School Leadership (2012) was employed. Portions relating to personal perspectives of principals regarding themselves, their students and the job were derived from the overall results. The instrument is the last in a series of annual surveys on education sponsored by the MetLife foundation from 1984 through 2012 and many questions closely mirror elements from the national, Interstate School Leadership Licensure Consortium (ISLLC) Standards for School Leaders (1996, 2008), recently revised as Professional Standards for Educational Leadership (2015). The survey in itself was chosen because of its high regard in the overall educational community and its clear description of schools and focus on school

administration as important to school success (National Association of Secondary School Principals, 2013).

Findings

Principals' Perceptions of Their Students

Participants were asked to approximate percentages of students in their schools from low-income families. The majority of principals (43.2%) reported that 67% or more of their students are from low income families. In relation, 40.5% of principals reported 33% or fewer of their students are from low income families. In all, the results indicate that most participating schools have either a high number of students from low income families or a low percentage of students from low income families. Fewer than 20% of schools show a moderate diversity of income levels.

The percentages of minority students in schools were reported in similar fashion. Exactly half of the principals claimed that 67% or more of their student body is minority, while approximately 32% of principals claimed that their school is less than 33% minority. This data suggests that the schools represented here are either mostly white or mostly minority, but fewer are well-mixed. Just 17.5% reported that they had between 34% and 66% percent minority students in their schools.

Regarding principals' perceptions of the percentage of students in their schools who are at or above grade level in English/Language arts and mathematics, just 7.5% of the participants indicated that all of their students are at or above grade level. The majority of participants indicate that either most (67.5%) or some (25%) of their students are on or above grade level. No schools reported that very few/none of their students were at or above grade level. The data presented here indicates that the overwhelming majority (around 70%) of urban Catholic school principals report that most or all of their students are on or above grade level.

School Budgets and Teacher Support

Given that many urban Catholic schools are constrained by monetary factors (Hamilton, 2014) several questions are highlighted relating to the overall budget and teacher development opportunities between the 2015 and 2016 school years. One-fifth of principals (20.5%) reported that their school budgets had decreased from the previous year and almost one-half (23.1%) reported that the school budgets had remained the same. Thus, a combination of almost one-half of all schools (43.6%) reported that their budgets did not increase from one year to the next.

Professional development opportunities for teachers increased for just over half of those schools, though only a small percentage (3%) reported a decrease in professional development. Time for teacher collaboration and planning, on the other hand, increased by only 33% from one year to the next, and most participants (51.4%) reported that time in this area had remained the same. While the results here in both categories do not, by themselves, indicate whether the time given to teachers for professional development and/or collaboration is sufficient, we can see that neither decreased proportionally with the schools' budgets. If this is true beyond the samples presented here, we might conclude that when trimming budgets, urban Catholic school administrators are not trimming professional opportunities for faculty and staff to the same scale.

Principals Report on Their Jobs

Several questions relate to urban Catholic school principals' perceptions of their jobs. When asked to rate levels of great stress experienced per week and combining the top two categories, close to 75% of participants in all indicated that they experience great stress either several times a week or daily. No principals reported that they never feel great stress and only a small percentage (12.8%) reported great stress less than once per week. When queried about what their greatest challenge is in administering an urban school, principals reported that finances are probably their greatest challenge, though some schools are reported as significantly better off financially than others.

One-hundred percent of participants indicated that they are either somewhat (63.2%) or very (36.8%) satisfied with their positions as principals. Contributing factors for these results are given in the interview section and include seeing students who are up against urban pressures succeed, and as Catholic school leaders, participating in the overall mission of the Church. From the figures reported here, it would appear that high levels of stress do not detract from the overall satisfaction the principals feel, though the question of what factors may cause such stress are not necessarily related to principals being satisfied with their positions.

Principals also reported agreement with the statement that, the job of principal has become too complex in recent years. Almost 90% of participants stated that either they somewhat or strongly agree with the statement. Nevertheless, it appears that neither job complexity nor great stress on the job are factors for principals deciding to leave their positions and seek careers in other professions. When asked about the likelihood of their leaving the profession within the next five years, just 31.6% reported that it is fairly or very likely that they will do so, while most indicated otherwise.

Principals were also asked to rate how well they were prepared for their jobs as principals through training program for the profession. In examining the combined categories, somewhat/strongly agree, 75% of participants agree that they were well-prepared, while 20% disagreed and 5% indicated that they didn't know. While the data indicates an overall satisfaction with the training that principals had, it does not specify whether such training is the result of a university-based program of educational leadership preparation or a school-system training program that may have existed.

The complete results for how urban Catholic school principals view their jobs and the job of principal are found in Tables 1 and 2.

Table 1. Perceptions of Job and Preparation by Mean and Standard Deviation

City	Job Satisfaction	Job too Complex	Level of Preparation
District of Columbia	3.153/.3755	2.846/1.068	3.153/1.143
Baltimore, MD	3.625/1.024	3.001/.9660	2.687/.9464
Indianapolis, IN	3.700/.4830	3.400/.5164	2.700/.6749

Scale – 1 = Lowest Rank; 4 = Highest Rank

Table 2. Perceptions of Level of Daily Stress by Mean and Standard Deviation

City	Level of Stress
District of Columbia	3.769/.9268
Baltimore, MD	4.125/1.147
Indianapolis, IN	3.700/.8232

Scale – 1 = Lowest Rank; 5 = Highest Rank

Statistical Comparisons

Level of great stress as determined in this study indicates that almost 75% of participants report great stress either several times per week (51.3%) or daily (23.1%). Given that such stress might commonly affect perceptions of other areas, a one-way ANOVA was conducted to compare the effect of stress on job satisfaction or the likelihood of leaving the profession within the next five years.

There was not a significant effect between the level of great stress experienced per week and level of job satisfaction as reported by participants at the $p < .05$ level for the four conditions: very dissatisfied, somewhat dissatisfied, somewhat satisfied, and very satisfied ($F(3,35) = .0321, p = 0.810$).

There was not a significant effect between the level of great stress experienced per week and likelihood that the principal would change professions within the next five years at the $p < .05$ level for the four conditions: very unlikely, somewhat unlikely, fairly likely, and very likely ($F(3,35) = 1.386, p = 0.263$).

In conclusion, though the level of reported stress was high, there is no statistical evidence that it has any influence on principals' levels of job satisfaction or how long they intend to remain in the profession.

Participant Interviews

In order to gain greater clarity on responses as well as more information on the positives and challenges of the urban Catholic schools studied here, five principals were interviewed by phone in approximately forty-five minute segments. Those interviewed represent all three of the cities that were the focus of this study and there was at least one principal representing either elementary or secondary schools.

Participants were asked open-ended questions related to their perceptions on the survey outcomes as related to their schools, their students, and their jobs as urban Catholic school principals. The researcher was specifically interested in their greatest challenges and some of the positive experiences they have found as urban Catholic school leaders. Presented with survey results noting among other issues that stress levels are high and school budgets have declined some schools from one year to the next, interviewees pointed to financial constraints that many urban Catholic schools face as a source for stress and continued worry. Three principals noted that the managing the budget is often a challenging task and acknowledged that financial worries often make their jobs difficult overall. They stated that their schools' greatest expenses are on employee salaries but that repairs for older buildings sometimes caused financial headaches and even occasional unwanted surprises outside of the regular annual budget.

One principal from Indianapolis indicated that her school (and others like it) would likely be closed if it were not for voucher funding from private individuals and institutions. In all, principals did not dwell on finances, with the inference that, though lack of resources is a struggle, it comes with the territory of urban Catholic education. Still, finances appear to constrain what schools can offer students outside of the general curriculum.

Another foremost challenge presented by interviewees centers around the struggle of attracting and retaining high quality teaching staff. All of the principals claimed a high level of autonomy to hire teaching staff but added that other factors, such as the school's financial situation as related to its ability to pay competitive salaries as well as the unwillingness of some teachers to work in low-income neighborhoods, were constraining. For the lower income urban schools, it is a constant challenge to find and retain staff who possess the talent to meet the needs of the diverse population of students as are often found in their urban schools.

Several participants shared that getting teachers to hold students to high expectations, and not simply accept the work of some continually poorly performing students, remains a constant challenge. This is concrete evidence of what was expressed in the survey regarding principal perceptions of students' working on grade level, where over 30% of participants indicated that only some of their students are doing so. Even where the teachers were praised for their skills, principals expressed the concern that some students are allowed to perform at lower levels than the principals would prefer. One principal stated that this is his greatest challenge occurs when otherwise caring teachers tend to feel that they are helping students by enabling them to perform at a lower standard. He has made increased academic rigor for students a major goal for his school in the coming years.

Another theme that was echoed as a challenge is maintaining adherence to school mission. All of the principals described themselves as deeply committed to the faith and related that they find great job satisfaction in participating in the educational mission of the Church. For urban Catholic school principals, and especially for those in schools with high percentages of non-Catholic teachers and/or students, the concern is that schools' Catholic identity can be downplayed or changed while trying to meet the needs of urban youth - many of whom are not Catholic and do not identify with the religion. Fuller and Johnson (2014) discuss the phenomenon of one urban Catholic school that has shifted away from its religious identity toward a more secular form in order to drive high academic performance for underprivileged students. For a Catholic school where the community population has shifted and thus, their school's enrollment is largely non-Catholic, a more secular perspective that helping underprivileged urban youth is good may become more of the norm than adherence to traditional religious values. Still, of the four Catholic school principals interviewed for this study, all expressed that Catholic and Christian identity is very important for their schools.

Principal autonomy was noted as relatively high in all of the schools. Though the schools are not usually beholden to a large central office in the same way as most public schools, it is clear that principals do spend a good amount of time brokering between various stakeholders. Some principals shared that outside influences, such as local church authority or parents (who pay tuition), do affect how their schools operate. In the case of one school, where the clientele was noted as well-off, parental influence - as well as the influence of school alumni (who donate a great deal of money) - was described as "almost problematic."

Principals were asked to describe that which brings them the most enjoyment in their jobs. All four were unanimous in saying that they find joy in their students when they see the positive impact their school is making on students' success and students' lives - in both the religious and secular senses. One principal shared how his school's ties to faith and religion have a very positive impact on not only his students, but on the families of his students as well. He stated, "I believe in urban Catholic schools because we can get at whole child in ways other schools cannot. We articulate the values and offer the parents values, providing a richer and deeper transformation."

Conclusions

While the racial makeup and higher age bracket of the principals may seem out of the norm, the urban Catholic schools in this study are not alone in having mostly white, older, school leaders. According to the National Center for Educational Statistics (2012), approximately 68% of city public school principals are at least 45 years of age, while 63.5% are Caucasian. This may be, however, where the similarities end. When comparing faith-based urban principals with public urban principals it is important to note that religious school principals are usually required to practice a faith of some kind (which likely limits the applicant base). These findings can challenge some faith-based schools in finding suitable replacements for school leadership.

Principals who participated in this study - particularly in the interview section - mirror the perceptions of urban Catholic school principals from the research when it comes to what challenges they perceive and how they address them. Finances are considered a great challenge for schools that rely on tuition, gifts, and local church support for their continuation. For leaders who might struggle with very limited resources, this might be somewhat unnerving. Add to this to the need to find qualified faculty and keep enrollments at a reasonable level, all in neighborhoods where money is often not plentiful, and one can see why principals rated the job as “too complex.”

Perhaps most concerning for school leadership is that almost 75% of participating principals indicate that they experience great stress either daily or at least once or twice per week. While studies indicate that just over half of public school principals (in all types of school environments) report great stress at least once or twice per week (Met Life Survey, 2012) some might guess that the religious nature and autonomous structure of faith-based schools would act as a shield to the same kinds of stress experienced by principals in public schools, and yet these findings dispute that. One key to understanding the stress experienced by the participants in this study lies in the interview sections, where principals lamented that finances are of big concern. Given the large numbers of urban Catholic educational institutions that have closed over the last forty or so years (Hamilton, 2008), the causes of stress for urban Catholic school leaders is likely different from their public and charter school counterparts. This is affirmed in the research indicating that over 20% of urban Catholic schools studied here reported a budget decrease between the 2015-16 and 2016-17 school years. In addition, during the same time period, 23.1% of schools reported that their budgets remained the same. Thus, a combined percentage of over 43% report that the budgets did not increase between school years, when it would be assumed that increased tuition and teachers' salaries from one year to the next would naturally necessitate an increased budget.

Despite the stress, faith is important to the principals represented here and they report that they are often driven by the notion of participating in the ministry of the Church. Despite high concern for the financial condition of some schools, principals report that they are largely satisfied with their jobs and that they plan on continuing in their profession for the next five years or more. Given their professed greatest joy in seeing students from precarious living situations succeed academically and in their personal growth and faith, it appears as though for many, the positives of the job of urban Catholic school principals may outweigh the negatives. Despite some difficult conditions, principals of economically stressed Catholic schools feel that the struggles to keep their schools in operation are worth it.

Given the professed dedication and experience of urban Catholic school principals, as well as research suggesting that such faith-based schools are effective for both urban students and their surrounding neighborhoods, many might argue that faith-based education has been an asset for

urban communities. Unfortunately, the struggle to keep the poorest of Catholic urban educational institutions alive does not appear to be over. This is evidenced by the large percentage of schools that indicate financial issues that imperil about one in five of the schools studied here. Pointing to the long history that faith-based schools have in this country, as well as the strong academic and personal success rates of students attending these schools, the argument exists for the expansion of public funding for faith-based schools, including Catholic schools, especially in distressed areas.

Implications

The information presented here is descriptive and not comparative. Though evidence points to many positive contributions that faith-based schools make to the field of urban education, the goal of this research is not to compare Catholic school leaders with those of non-religious schools, but rather to describe what urban Catholic school leadership looks like today and how this may contribute to the broader field of urban education. An apples-to-apples comparison of school types or their leadership based on the information provided would not be particularly helpful given that the majority of faith-based schools traditionally emphasize student success with graduation rates and percentages of graduates heading onto college or university (Smarick, 2013). Public and public charter schools, while giving graduation rates and college attendance increased attention in recent years, are accompanied by strong emphasis on annual standardized tests (Stuit, Berends, Austin, & Gerdeman, 2014).

Catholic education is depicted here as an addition to educational choice in three urban areas known for placing a high emphasis on school choice. Though the influence of Catholic schools has been diminished as large percentages of urban schools have closed, those that remain open – or have just recently opened with a focus on urban populations – appear to be a valuable asset to the cities in which they are located. Given what we know about Catholic education both from the research found in this study and the research cited for it, urban faith-based schools appear worth the effort.

On the national “school choice” front, Catholic school leaders should be willing to team up with those of other urban faith-based educational institutions in order to tout the successes of faith-based education and lobby for state assistance, especially in regions where it is needed the most. Advocates should be willing to fight hard for their continuance and should stress the diversity of options that will strengthen urban education rather than become mired in negative discourse depicting support for non-public schools as a drain on urban public education. Many cities around the country are seeing a resurgence of interest from young, well educated people who want to live in neighborhoods that are racially and economically diverse. Faith-based education as one option will strengthen educational offerings in such regions, not take away from them.

The principal participants in this study profess a high affection for their students and a particular joy in student success. Principals place high importance on their faith, profess high levels of job satisfaction, and indicate commitment to remain in their jobs for at least the next five years. These attributes are praiseworthy on their own, but noting the same principals’ perceptions of high job-related stress and a job has become increasingly complicated, makes their dedication and commitment even more remarkable. Having leaders with such traits is a gift to the Catholic schools but also to urban education as a whole. In order to keep the continued momentum, a recommendation is for school leadership to work diligently to form a pipeline of future Catholic school leaders who will be ready to take on these uniquely defined positions when those currently serving leave their positions. A heavy emphasis on school leadership preparation that includes a mentoring system by current and former Catholic school leaders will ensure that future leaders

know not just the mechanics of school operation but also the history and charism that is particular to Catholic education.

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Part 4: Educational Technology

How Affective Are Learning Management Systems for Detailed Feedback

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Abstract

This study addresses the research question focusing on faculty perceptions of how the features of existing LMS currently and potentially enhance their assessment of student work. Within this type of technology, the selection of a couple of main systems, namely Blackboard and Moodle, is examined. A critical analysis of the exiting literature on the adoption of these features within the classrooms for purposes of assessment for learning is presented. Additional analysis was conducted in order to identify the factors that can elevate the perception and use of LMS as major tools for formative assessment. A mixed methods research design was used in order to evaluate the effectiveness of formative assessment tools in LMS address the gap in the literature.

Keywords: LMS, faculty perceptions, assessment of student work, mixed methods

Introduction

Educational researchers and professionals are increasingly emphasizing the importance of classroom assessment, owing to the great weight placed on accountability in North American and other educational spheres (DeLuca, Klinger, Searle & Shulha, 2010; Klinger, Volante & DeLuca, 2012). Additionally, these authors assert that there is a growing need to build teacher assessment capacity, especially when it comes to formative assessment.

Gikandi, Morrow and Davis (2011) state that self and peer assessment, a process whereby students or their peers grade assignments or tests based on benchmarks determined by teachers, as well as teacher performed formative assessment, can be conducted through web-based software like learning management systems (LMS). Kiryakova (2010) also asserts that the development of the LMS facilitates formative assessment by providing several tools. However, Gikandi, Morrow and Davis (2011), Govindasamy (2002) and Otsuka, Bernardes and da Rocha (2004) identify that LMS of the present era lack features which are specifically designed to assist in formative assessment. This compels the instructors to take additional measures to monitor, analyse and advise the learning process. The LMS needs to provide tools which support the optimum level of meaningful interactions and valuable experiences for online learners within various disciplines. The purpose of this study is to critically investigate the potential of LMS, like Blackboard and Moodle, to equip teachers in higher education to conduct formative assessment and to support student learning.

Recently, technology has gained ground as one of the main players in education in general and in formative assessment in particular. The evaluation cycle is being analyzed by researchers to ascertain how technology can effectively help the instructors and learners at each step of the cycle (Natriello, 1987). Existing use of technologies are being questioned and software being re-evaluated to improve the mechanics of cycle. As classroom technologies become more sophisticated and more pervasive, not only are philosophers questioning the impact of digitizing the classroom, but they also point to the continuing constraints of the technologies which are not able to fully capture the classroom needs for teachers pursuing formative type of assessment with their students (Gikandi et al., 2011).

However, assessment using ICT as a basis is still a minority activity (a major exception is the use of skills tests for trainee teachers). This research addresses some of the issues that are involved in moving towards computer based assessment. Would such a development be desirable, if it were found to be feasible? As any test developer will argue, high-quality tests are time and resource-consuming to develop.

Literature Review

Teachers need to assess the knowledge and skills of their students for a variety of purposes, for example for reporting and assisting in improving their decisions about instruction. Assessment practices employed by teachers not only impact student learning but also improve their self-monitoring and regulation of their learning (Klinger, Volante & DeLuca, 2012). Assessment is a core component of formal higher education. As identified by Bransford, Brown, and Cocking (1999), assessment is the heart of effective learning. The authors assert that learners are provided with prospects to demonstrate their evolving aptitudes and obtain assistance to enhance their learning if teaching and learning processes are based on assessment.

Recent developments in higher education have involved increased adoption of information and communication technologies (ICT). Education activities such as electronic learning (e-learning) and technology-enhanced learning (TEL) have become important elements, providing new opportunities and approaches to teaching, learning and assessment in higher education.

It is observable that assessment using ICT as major tool of development is yet to reach its potential by a long margin in most areas. High-quality tests are time and resource-consuming to develop and if the costs of ICT projects are also taken into account as well as costs of producing good-quality electronic teaching materials, it will become clearer what the areas of improvement are for electronic assessment might be taking in the near future. Apart from development costs, Bennett (2002) outlines limitations of computer-based assessment systems that include dependability of hardware and software since interruptions to high-stakes testing activity could have significant effects on student performance. Security is also a concern because control of access to both questions and student data has to be maintained. Although there are also problems with paper-based examinations, we have well-understood systems to manage them whereas the online version's security is a work-in-progress. Measurement issues also are present that affect student performance such as familiarity with screen-based work, and variations in speed of the Internet connections. Limitations of question types which are readily available and/or easy to use is an aspect worth researching more. Equity issues like access to, and familiarity with, computers are also discussion point for policy makers.

There are other ways of supporting students via ICT: using discussion boards to ask questions or address problems, and sending assignments via e-mail and receiving feedback comments via e-mail, can be convenient and helpful for those with easy Internet access. Application of this technology could bring improvements in reliability and accuracy of marking, eradicate clerical errors, speed up the marking process and, possibly, reduce the cost.

Kiryakova (2010) outlines the different types of assessment that lend themselves well to being implemented using technology. Among others, these assessment types include short answer questions, group projects, short tests, assignments, peer assessments. The increasing prevalence of ICT in teaching and learning presents new challenges to e-assessment, as well as new opportunities. In the UK policy context, e-assessment tends to be understood as 'end-to-end

electronic assessment processes where ICT is used for the presentation of assessment activity, and the recording of responses' (JISC, 2007). This suggests that the main priorities for e-assessment have been institutional strategy, the development of standards, technical infrastructure and learning support tools and not so much the pedagogical dimension of practice. The latter is on the increase, though, not least in view of a recent policy focus on personalisation and e-portfolios. It is important to note that effective e-assessment needs to take account of the human-centric, social dimension as well as technological, data-gathering and management perspectives. More attention needs to be paid to the social than has been the case until now, and to the ways in which a learner appropriates social and interactive as well as technological resources within formative assessment contexts.

Several studies discuss the role of technology for formative assessment at higher education level, for example, Wilson, Boyd, Chen and Jamal (2011) investigated the effectiveness of computer based formative assessment in a large, first-year undergraduate geography course at a Canadian higher education institution. Through the results of this mixed methods study, the feedback from students revealed that they find the computer-assisted practice quizzes extremely helpful with over 95 percent indicating that it helps them to identify their strengths and areas of improvement as well as help them prepare for exams. However, this study does not highlight the role of the instructor in preparing or conducting these formative assessment tasks. Also, it does not showcase the obstacles that instructors or students could face while working with multiple choice questions as well as other types of assessment tasks.

Similarly, Orsmond, Merry and Callaghan (2004) designed a mixed methods study to enhance students' ability to implement assessment marking criteria and to improve the role of verbal feedback in student learning. Results implied that formative assessment models allow discussion to focus on student learning and for feedback to be given within the same or different modules or courses. Since quantitative results from the study both confirmed and clarified the outcomes from qualitative section, this research is an example of how one research method could be used for both triangulation and complementarity as indicated by Johnson and Onwuegbuzie (2004). Some of the areas to improve on this study were that none of the students had taken part in peer assessment exercises before. Also, this study was also not nested in a conceptual context.

There are different reasons that encourage the introduction of ICT-based assessment. It helps to avoid validity issue between teaching and assessment modes since all learning activities are electronic based. It also improves efficiency by saving time in grading. Kiryakova (2010), however, contends that not all courses require extensive use of technology, especially the ones which are completely conducted face-to-face. Nevertheless, he advocates the use of the LMS. There are many different options available when it comes to using LMS's. There are popular ones like Blackboard and open source Moodle. There are others as well which are becoming popular like desire2learn and Joomla. He concludes that by using LMS both traditional means for summative assessment and various activities for formative assessment can be supported. As a result of implementation of the activities that support formative assessment, there is heightened interest and responsibility for the learning process by learners. These systems offer opportunities for conducting activities that support formative assessment but which were not possible before or took a long time to complete. Role, benefits, drawbacks and constraints of LMS in formative assessment will be further discussed in the conceptual framework which is based on the need for a novel view of formative tools in LMS.

- Which LMS features are currently being used by professors and what are the factors which determine the features that they use?
- In professors' perspectives, how effective are the LMS assessment tools for formative purposes and what are the factors that determine their effectiveness?
- What could be done to improve the effectiveness of LMS assessment tools for formative purposes or introduce new ones?
- What can be done at the manufacturer, institution, instructor, and student levels to encourage and enhance the use of LMS assessment tools?

Conceptual Framework

A lack of literature on tools in LMS for formative assessment as well as absence of critical constructs of attributes of instructors as well as needs of the instructors led development of a new conceptual framework to nest this study in. Consequently, the needs of instructors in the domain of formative assessment were identified. Thereafter, several prominent tools and their features were discussed to illustrate how they act as drivers for supporting learning. This helped to understand how each of these tools meets the requirements needed for effective formative assessment. Due to a lack of literature on the use of formative assessment tools in LMS, it was imperative that this topic is founded with the help of related constructs. For the purpose of establishing the relevance of this topic, assessment within the literature on LMS as well as formative assessment within the theme of electronic assessment (e-assessment) were synthesized. Figure 1 depicts these concepts and their inter-relationships with each other in a concept map.

The main concepts in the map illustrate that instructors bring with them certain attributes, for example experience and number of hours of training. They engage in classroom management, instruction, and assessment as part of their daily activities, with assessment being summative or formative in nature. Although the elements of formative assessment as outlined in the next section can be conducted via traditional assessment methods, the concept map points out that this study is striving to discover the effectiveness of LMS in this regard. The map further indicates that there are certain barriers to implementation of formative assessment via LMS which can be classified as institutional, manufacturer, and related to student competence in dealing with LMS.

LMS have the potential to address needs of teachers in formative assessment and to support student learning. In order to effectively meet these needs, instructors must identify the requirements of formative assessment. Trumpower, Filiz, and Sarwar (2014) succinctly lay out the criteria (hereafter referred to as 'elements') for teachers to carry out effective formative assessment, arguing that it must (1) assess higher order knowledge, (2) identify students' strengths and areas of improvement, (3) provide effective feedback, and (4) be user-friendly. The analysis of the literature, however, is compelling to include another element to their existing scheme, specifically teachers' ability to track student learning over time. This concept will be discussed as the fifth significant element. These elements are connected to the concept of formative assessment in the conceptual framework.

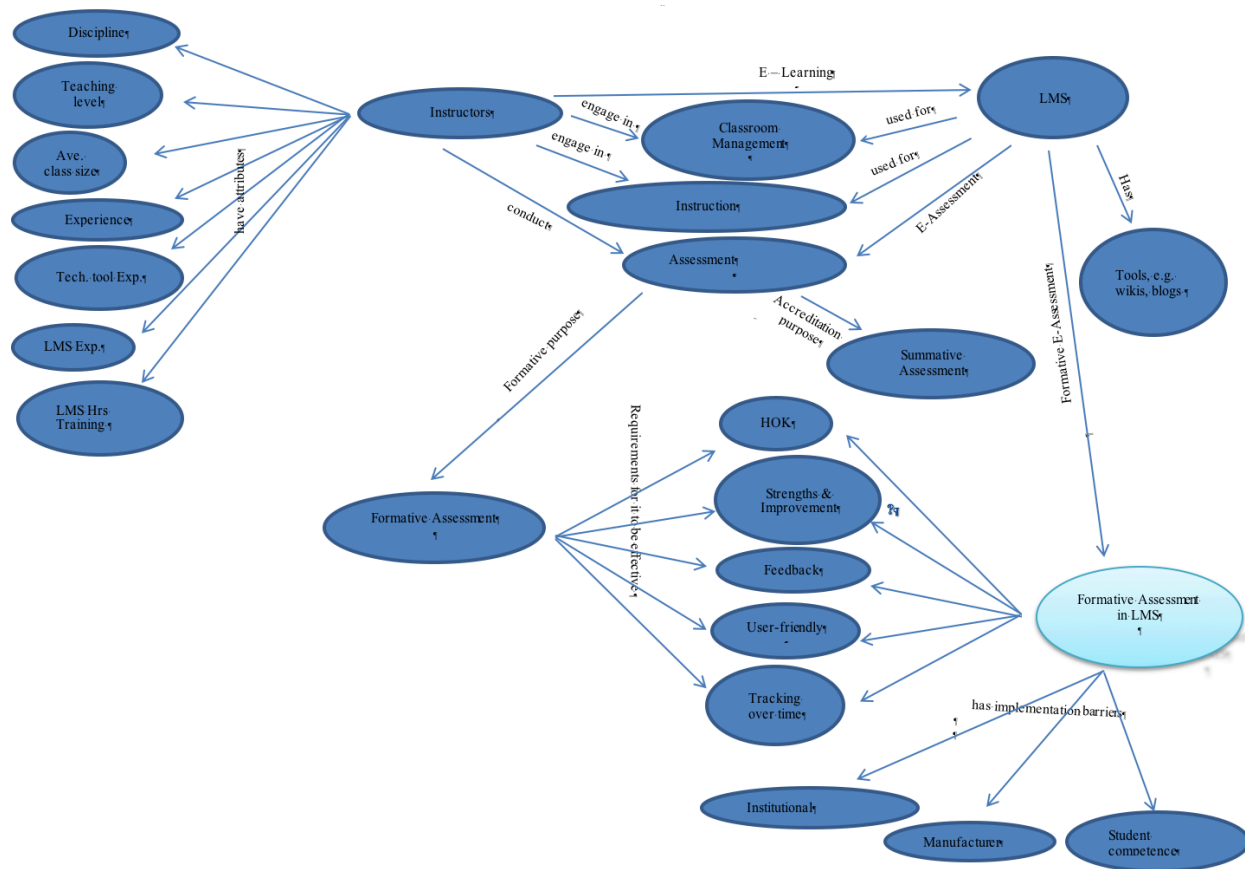


Figure 1. The conceptual framework

Methods

Data Collection

This study used a mixed methods (Tashakkori & Teddlie, 2003) design, which is a procedure for collecting, analyzing and mixing quantitative and qualitative data at some stage of the research process within a study, to understand a research problem more completely (Creswell, 2002). The rationale for mixing is that neither quantitative nor qualitative methods are sufficient by themselves to capture the trends and details of the situation, such as a complex issue of professors' outlook towards features in a particular type of software used in teaching. When used in combination, quantitative and qualitative methods complement each other and allow for more complete analysis (Green, Caracelli, & Graham, 1989; Tashakkori & Teddlie, 1998). Mixed method research is employed to understand a research objective through multiple research phases, enhance a study with a second method, and to explain initial results (Creswell & Plano-Clark, 2007). A qualitative research method can help explore a problem but a mixed methods research can assist to analyse and mix quantitative and qualitative data at some stage of the research process within a study to understand a research problem more completely (Creswell, 2002). A quantitative section in this study assisted in understanding the general trends in professors' opinion and also provided the researcher with a set of new questions to probe while interviewing the participants.

This study used one of the most popular mixed methods designs in educational research: sequential explanatory mixed methods design (Figure 2), consisting of two distinct phases (Creswell, 2002,

2003; Creswell et al., 2003). It helped when the researcher wished to use qualitative findings to help interpret or contextualize quantitative results. In the first phase, the quantitative, numeric, data was collected using a web-based survey and the data was analysed. The goal of the quantitative phase was to identify how certain variables influence the instructors' perspectives towards features in LMS and to allow for purposefully selecting informants for the second phase. This study also endeavored to fill the gap identified by Ghani and Trumpower (2015) about the lack of mixed methods empirical evidence to support the best practices for formative assessment.

After tabulating the results and running statistical analysis, an interview schedule was prepared in order to further explore the trends that emerge. In this phase, a qualitative approach was used to collect text data through individual semi-structured interviews, documents, and elicitation materials to understand why certain factors may help explain the deficiencies in the systems. The rationale for this approach is that the quantitative data and results provide a general picture of the research problem, for example, determining the general trends of the perceptions of instructors vis a vis formative use of assessment tools in LMS, while the qualitative data and analysis will refine and explain those statistical results by exploring participants' views in more depth.

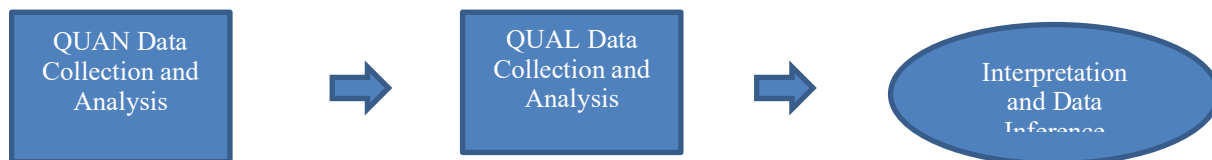


Figure 2. Sequential explanatory mixed methods design

Results

Phase I - Quantitative

Psychometric analysis of the survey instrument was performed in order to obtain evidence about reliability and validity. Various statistical analyses were conducted and ratings on quantitative data were run on SPSS. Before the statistical analysis of the quantitative survey results, the screening of the data was conducted on the univariate and multivariate levels (Kline, 1998; Tabachnick & Fidell, 2012). Data screening helped to identify potential multicollinearity in the data, because multivariate tests are sensitive to extremely high correlations among predictor variables.

Demographics

The demographic section preceded the questions related to the research questions 1 through 4. Descriptives analysis of the responses included a total of 99 responses that were received from the two universities across 14 disciplines. It was revealed that 43 participants were from University of Ottawa whereas 56 were from Carleton University. Out of the total, 58 identified themselves as full time professors, 19 as part time, 14 as adjunct and 7 as non-union term limited professors. 47 professors teach at undergraduate level, 10 teach at graduate level while 42 teach at both levels. Class sizes at different level of studies were categorized to create suitable ranges. For example, undergraduate class sizes were: small classes of 1-39 students (30%), medium class size of 40 – 99 students (39%), and large classes of 100 or more students (25%). Graduate classes were only divided into two categories: small of up to 14 students (45%) and large of 15 or more (53%). Based on the years of experience teaching at the higher education level, professors were also classified into low, medium and highly experienced professors. Those with 1-7 years of experience were

classified as low experience (23%), 8 to 14 years as medium (40%) and 15 or more years were classified as highly experienced professors (36%).

Responses to question 7 show that almost 74% of the respondents have no non-LMS technical experience which is in an indication that professors are more inclined to use a LMS - question 6 returned only 5% of the respondents with no LMS experience - compared to other technopedagogical tools. This stark difference could be explained by various aspects. One is indeed that they are often required by the administration to use the LMS commissioned by the institution and then they become accustomed to using various features of the system or they believe that this is what the students expect. More than a third of them have not had no training on LMS whatsoever, which is shown by question 8. It further exemplifies the non-significance attached to learning technologies. Combined with responses from question 8 which shows that around two thirds of all respondents had some training, it appears that higher education institutions place relatively greater importance on these systems. However, it also shows that many professors are using them without extensive or any training to use them more effectively.

Research Question 1

Professors were asked about which of the LMS features from a list they have used for a) providing detailed feedback or b) assessing student knowledge. A frequency analysis shows (Table 2) that the professors have mostly (n= 26) used 3 tools for feedback but 18 professors have not used any feedback tool available in LMS. In comparison, when it comes to professors using LMS tools for assessment purposes (Table 1), 39 of them indicated using either 1 or 2 tools, whereas more than a third (n = 34) indicated that they do not use any such tool.

Table 1. Number of LMS Tools Used by Professors for Providing Feedback and for Assessing Knowledge

No. of tools used for feedback	<i>for providing feedback</i>		<i>for assessing knowledge</i>	
	No of profs	Percent	No of profs	Percent
0	18	18.2	34	34.3
1	18	18.2	19	19.2
2	12	12.1	20	20.2
3	26	26.3	14	14.1
4	10	10.1	8	8.1
5	9	9.1	2	2.0
6	5	5.1	1	1.0
7	1	1.0	1	1.0
Total	99	100.0	99	100.0

The phenomenon of only 18 professors not having used any feedback tool available in LMS compared to 34 professors using none of the LMS tools for assessment purposes can be explained with the reasoning that some professors may view these two activities as distinct from each other.

Use of LMS tools for different purposes at different levels of teaching was also analyzed. Table 2 displays that discussion forum and assignment tools within LMS are used the most by professors for providing feedback and assessing knowledge. However, email function in LMS is also popular for providing feedback and quiz builder for assessing knowledge. It highlights the fact that not too many professors perceive quiz builders, and even quizzes, as tools which could be used to provide feedback to students. Only small fractions of the professors confirmed the popularity of rubrics with 18 professors using it for providing feedback and 14 for assessing student knowledge. It is

surprising to see rubrics still lagging in popularity for both providing feedback and assessing knowledge.

Table 2. Frequency of Response for Each Tool Used by Professors

LMS feature	Frequency of profs using LMS feature for	
	providing detailed feedback	assessing student knowledge
Quiz builder	13	26
Discussion Forum	46	29
Comments box with submission	35	10
Email within the LMS	66	10
Wiki	3	13
Blogs	4	7
Journal	7	6
Assignment Tool	40	46
Rubrics	18	14
Other (please specify)	10	4

It was hypothesized that results for LMS features professors use for providing detailed feedback should be consistent with a different question where professors rated, from 1 (Never) to 5 (Very Frequently), their usage of an LMS for formative assessment purposes. These questions further build validity/reliability in the survey with both referring to professors' use of LMS for providing feedback. Frequency tables show that 20 professors said they have not used an LMS for formative assessment purposes compared to 18 who have not used any of the tools mentioned. Furthermore, correlation between total number of tools used for providing detailed feedback with using an LMS for formative assessment purposes indicates a strong, positive statistically significant correlation with $r(97) = .589, p < .01$.

Similarly, it was hypothesized that results for LMS features professors use for assessing student knowledge should be consistent with the question where professors rated, from 1 (Never) to 5 (Very Frequently), their usage of an LMS for assessment purposes. 34 professors said they didn't use any of those tools for assessment compared to a total of 29 professors in question 12 who said they have never or rarely used it. Correlation between the total number of tools used for assessing student knowledge with using an LMS for assessment purposes indicates a statistically significant correlation with $r(97) = .493, p < .01$.

Table 3. Means and Standard deviations for items in Research Question 1

	N	Mean	Std. Deviation
Total 9a	99	2.444	1.8139
Total 9b	99	1.576	1.5720
10.I have used LMS for classroom management/administration purposes (for example, posting important announcements on the bulletin board).	99	4.455	.9505
11.I have used an LMS for instructional purposes (for example, posting an instructional video).	99	3.818	1.4240
12.I have used an LMS for assessment purposes (for example, posting an online assignment or quiz).	97	3.361	1.5558
13.I have used an LMS for formative assessment purposes (for example, providing feedback to students).	99	3.242	1.4921

The qualitative section of this question mainly returned responses from professors who were using LMS for sharing resources ($n=7$) with students. The second most popular response was that they were not using any tool whatsoever ($n=3$).

Some of the professors indicated that they use email within LMS for feedback but some also use it for assessment. Whereas some professors use LMS for communicating with students and might view it as feedback, those who perceive it as a tool used for assessment could be using it for sending and receiving communication regarding an assignment. Quiz can be classified more specifically as an assessment activity than feedback and the data confirm that more professors have used quiz builder for assessment than feedback.

Cross tabulating results from LMS feature used for providing detailed feedback and for assessing student knowledge with level of teaching shows that there is a sizeable difference between professors who teach undergraduate, graduate or both levels in terms of number of tools used as shown by the tables below, but this can be attributed to a low number of respondents who teach only at graduate level.

Table 4. Aggregate of LMS Tools Used by Professors for Providing Feedback

Teaching level	Aggregate of LMS tools used by professors for providing feedback								Total
	0	1	2	3	4	5	6	7	
Undergraduate	8	5	8	12	5	5	4	0	47
Graduate	0	2	2	5	0	0	1	0	10
Both	10	11	2	9	5	4	0	1	42
Total	18	18	12	26	10	9	5	1	99

Table 5. Aggregate of LMS Tools Used by Professors for Assessing Students

Teaching level	Aggregate of LMS tools used by professors for assessing students								Total
	0	1	2	3	4	5	6	7	
Undergraduate	20	9	6	6	4	1	0	1	47
Graduate	2	5	1	1	1	0	0	0	10
Both	12	5	13	7	3	1	1	0	42
Total	34	19	20	14	8	2	1	1	99

As far as higher education experience is concerned, all three levels of experience of low, medium and high, mostly use 3 of these tools for feedback. Professors at all three levels rely on emails within LMS the most, with discussion forums being a distant second for this purpose. For assessment purposes, however, the use of LMS seems to be even less desirable, which further emphasizes the point that professors deem the assessment and providing feedback as separate activities. The highest incidence was of 34 professors claiming that they didn't use any of those tools for assessment, with at most 1 or 2 tools being the next best.

With regard to hours of training with LMS, the professors who have had no training predictably notified that they have not used any of the tools in LMS (n=9) while low level (up to 3 hours) of training (n=8) and higher level (more than 3 hours) of training (n=11) impacted professors to use mostly 3 tools as shown in Table 6. When it comes to using a particular tool for feedback more than others, professors with all three levels of training again opted for emails within LMS.

In contrast to giving feedback, the level of training did not seem to have any effect on the number of tools professors use for assessing students. Professors in general across the training levels (n=34) notified that they prefer not to use the assessment tools in LMS. For assessment purposes, however, the assignment tool was the most popular regardless of hours of training received (Table 7).

Table 6. Aggregate of LMS Tools Used by Professors for Providing Feedback Based on Training

hrs of training codes	Aggregate of LMS tools used by professors for providing feedback								Total
	0	1	2	3	4	5	6	7	
None	9	6	4	7	4	4	0	0	34
1-3 (Low)	5	7	7	8	1	2	1	0	31
4+ (High)	4	5	1	11	5	3	4	1	34
Total	18	18	12	26	10	9	5	1	99

Table 7. Aggregate of LMS Tools Used by Professors for Assessing Students Based on Training

hrs of training codes	Aggregate of LMS tools used by professors for assessing students								Total
	0	1	2	3	4	5	6	7	
None	10	9	9	4	1	0	1	0	34
1-3 (Low)	14	5	6	3	1	2	0	0	31
4+ (High)	10	5	5	7	6	0	0	1	34
Total	34	19	20	14	8	2	1	1	99

Numbers in table with means and standard deviations for items in Research Question 1 indicate that an overwhelming majority - around 88% of the professors gave ratings of either 4 or 5 where 4 = Frequently and 5 = Very Frequently - uses LMS for classroom management/administrative purposes. This percentage goes down to around 70% when professors using LMS for instructional purposes is concerned. It further deteriorates to 53% when professors rated their use of LMS for assessment. Furthermore, when professors were asked to rate their use of LMS for formative assessment purposes, the continuous downward trend comes to be around 47%. Contrasting to giving feedback using LMS, a vast majority of the professors indicated that they usually give detailed feedback with around 84% of the respondents either strongly agreed or agreed to doing so. It is important to note that this observation lends credence to the hypothesis of this study that even though instructors in higher education do tend to provide feedback, they are not comfortable doing it using LMS. Interestingly, none of the respondents indicated that they do not provide feedback.

Further analysing items in research question 1 in terms of the size of classes professors teach, the results show that for undergraduate classes, small class sizes had highest ratings in general while medium-sized classes had lowest ratings. However, biggest class sizes had slightly higher ratings than medium sized classes which indicates that LMS are used more with small classes to use the online features of the system but not as much as class sizes get bigger. But possibly as the classes get too big, the professors lean back on LMS for to better manage the activities mentioned. However, none of these differences were significant.

More professors who teach only at undergraduate level rate LMS for administration and instruction purposes higher, but when it comes to assessment and formative assessment, graduate professors rated the use of LMS higher. This trend was also visible in giving feedback in general. It reconciles with the fact that graduate classes are usually smaller which means professors can spend more time to give individual feedback, Also, it indicates that professors are more inclined to give feedback at higher level of classes.

Interestingly, the professors teaching undergraduate courses indicated that providing feedback to students most strongly for medium sized classes which is opposite to other items in the section, which seems to suggest that providing feedback and using LMS in general can be inversely related.

Another dimension which was explored was how the number of hours of training professors have received affects their perception of assessment tools in LMS. It was observed that for items in research question 1, as the hours of training increased, the use of LMS for various purposes seems to increase and particularly for questions about using an LMS for classroom management/administrative purposes and for assessment purposes, it seems to change significantly based on number of hours of training.

However, results from the question about giving detailed feedback to students on their assessments (question 14) indicate that LMS training does not have any effect on the feedback professors give to students in general with all three levels of training as well as no training returning very similar mean scores. It was expected based on the result other results discussed in this section. Additionally, the correlational values between questions that deal with professors' use of LMS for various purposes, correlate significantly with each other (which also displays validity within the instrument) but do not correlate with the question about giving detailed feedback to students on their assessments. However, results from questions about using LMS for formative assessment purposes and always giving detailed feedback to students on their assessments are significantly correlated with each other, $r = 0.331$, $n = 97$, $p = 0.001$. These values tend to suggest that even though professors who use LMS for other activities, also use it for providing feedback, they do not necessarily provide feedback outside of LMS. Another explanation of this could be that professors deem communicating with LMS as giving feedback to students.

For higher education experience, professor with low experience ranked use of LMS for various purposes as higher than the other groups, possibly pointing to the phenomenon that less experienced (younger) professors are more inclined to use technology. Professors across all groups of experiences ranked providing detailed feedback to student equally since providing feedback is considered an increasingly important part of the assessment particularly at higher education level.

Research Question 2

The trend that manifested in the mean plots of research question 2 showed mainly a neutral tendency and followed a normal curve. However, there are some points that stood out. Most respondents 'strongly disagreed' that comments directly via email (27%; $n=25$) are effective, while (32%; $n=29$) 'strongly disagreed' that face to face/video conferencing are an effective way to give feedback to students on selected response type assessment questions. Most professors (30%; $n=28$) also 'strongly disagreed' that providing comments via face to face (F2F)/video conferencing is an effective way to give feedback to students on open ended type assessment questions.

For undergraduate classes, most of the professors indicate that they use LMS more for smaller class sizes or very large ones, while the reliance on LMS goes down for medium sized groups. Even more emphatic are the results for the same questions for graduate classes, as the size of the class increases, so does the use of LMS technology. It is probably due to the fact that it becomes more difficult for professors to handle bigger classes and providing feedback in bigger graduate classes since they require more attention, a trend similar to undergraduate classes. Analysing the specific feedback items featured in LMS both for selected response type assessment questions as well as open ended assessment questions, the means of each item for graduate classes were invariably higher than the ones for undergraduate classes. This is consistent with earlier mentioned point that professors are inclined to give more feedback at higher level of classes.

An analysis of variance (ANOVA) of question which captures the general perception of professors regarding the effectiveness of LMS tools they use for giving feedback to students on selected response type assessment questions, with the level of teaching returning a non-significant effect whereas the following questions which specify the medium used for providing this feedback (via word processed file, directly via email and via face to face (F2F)/video conferencing) returning significant values. This indicates that teaching level does have an effect on their perceptions about the mentioned tools. However, it cannot be stated with certainty whether the difference is between graduate or undergraduate or the combined category. This could be due to the fact that the initial question was stated in general terms and the professors are more sensitive to specific questions which mention the tool they could be using. For graduate classes, only the question about using word processed file uploaded/emailed via LMS to give feedback on open ended type assessment questions returned significant effect based on different class sizes which shows that even though class sizes at graduate level clearly play a role in encouraging professors to use the tools further but not to a significant level.

The rankings for these questions based on professor's experience were more or less similar for each group which again points out that the features used in LMS for various types of feedback do not depend on the professors' experience.

Research Question 3

For the question about current LMS allowing to import assessment data and results by linking with external tools (q23), the professors indicated that they were neutral about it. Therefore, this was explored further in the qualitative section. Similarly, for the question regarding the five elements of formative assessment, the highest frequency of rating for almost all items for the element of formative assessment was 3 as can be seen in the tables below, which shows a tendency among professors to be very neutral towards ability of LMS to help them conduct formative assessment.

Table 8. Means and Standard deviations for items in Research Question 3

	N	Mean	Std. Deviation
23.I feel that the current LMS I use allows me to import assessment data and results by linking with external tools (e.g. Clickers, concept mapping software, simulations, etc.).	93	2.602	1.0544
24.I feel that the existing tools in the LMS that I use: a. allow me to effectively assess higher order learning in my students	98	2.867	1.0711
24.I feel that the existing tools in the LMS that I use: b. allow me to effectively identify my students' strengths and areas of improvement	98	2.786	1.0769
24.I feel that the existing tools in the LMS that I use: c. allow me to provide effective feedback to my students	98	3.255	1.1243
24.I feel that the existing tools in the LMS that I use: d. allow me to effectively track student learning over time	98	3.041	1.1746
24.I feel that the existing tools in the LMS that I use: e. are user friendly	96	2.719	1.2624

Research Question 4

A majority of the professors held the opinion that manufacturers of LMS focus more on technical aspects rather than pedagogical aspects of their products. On a 5-point Likert scale, 54% (n=51) of the respondents selecting 4 (agree) or 5 (strongly agree). For question 27, training, time, technical issues seem to be the strongest reasons for the professors to be deterred from using assessment tools within LMS with more than 40% of the professors indicating that 'lack of adequate training' to be the cause. 52% of the respondents rated either 'agree' or 'strongly agree' for 'time' being the factor of their discouragement. Even more strongly rated reason was 'technical

issues' with 57% of the professors claiming it to be the deterrent. Complete frequency results for question 27 are shown in the tables below.

An attempt to explain this phenomenon with the help of an ANOVA with factors of class size and teaching level reveals that the ratings of professors teaching undergraduate courses returned only 'lack of student competence, technical support, colleague support, and having technical issues' being the deterrents with statistical significance. It implies that only those items are affected by class size at undergraduate level. However, at the graduate level, none of the listed deterrents returned any significant differences due to the factors of class size and teaching level, indicating a possibility of the items on the list not being decisive for deterring graduate professors from using LMS for assessment purposes.

According to the least experienced professors, the listed items were not very representative of the issues they face while using LMS. Results show that they get least discouraged from using LMS since they did not indicate as many issues when the option was provided for them to express other obstacles. Hours of training also does not seem to be a deciding factor when it comes to using various features of LMS for feedback purposes. Neither does it seem to be a strong factor in determining any other RQ3 and RQ4 elements, except 27d and e, which shows that training can affect how profs feel about lack of technical support and help from colleagues.

For option 27a, it appears that level of training leads professors to believe that students lack competence in using LMS. It is shown by higher mean in their responses. For option 27b, it appears that professors who have more training feel more discouraged and that institutions don't support them to use LMS assessment tools. This phenomenon is explored further in qualitative section to gauge whether the professors who have training feel that the institution is not providing enough training on assessment tools, or once trained, they feel that the culture of others using assessment tools is lacking. Professors who don't have training may not be able to objectively answer about encouragement from the institution.

It was interesting that options 27d and 27e ANOVA were significant in terms hours of training. The results show that there was a significant effect of number of hours of training on professors being deterred from using LMS due to technical issues between none, low and high training at the $p < .05$ level $F(2, 93) = 4.348$, $p = 0.016$. Similarly, the effect due to reliance on colleagues is at the $p < .05$ level $F(2, 93) = 3.138$, $p = 0.048$.

Phase II - Qualitative

In order to determine patterns from the qualitative data sources, the constant comparative technique was used (Merriam, 2009). The steps in qualitative analysis included: (1) preliminary exploration of the data by reading through the transcripts and writing memos; (2) coding the data by segmenting and labeling the text; (3) using codes to develop themes by aggregating similar codes together; (4) connecting and interrelating themes; and (5) constructing a narrative (Creswell, 2002). Qualitative data was corroborated with quantitative data to ensure consistency of findings generated by the two data collection methods. Triangulation of data sources provided a deeper understanding of the phenomena which influence the use of assessment tools for formative purposes. Results were localized to each university and reported with specificity to domain, LMS type, and programme-level (undergraduate or graduate). To confirm the results of the analysis, a second independent coder interpreted the data. This two-member checking and interpretation ensured consistency in the qualitative data analysis.

In response to the question about technology based assessment tools, the theme that emerged was that most professors believed that such tools are helpful specially since the online and hybrid courses are becoming more popular. Large classes could use technology more since it is easier and more efficient to track student progress for both professors and students themselves. They also noted that it provides flexibility and ease for students and reduces the need to commute.

Most professors, however, also noted the challenges in response to the next question and agreed that new technology can be confusing compared to the previous one which they have worked and trained on. This leads to the need of new technology being more adaptive to the demands of instructor as well as being easy to learn. Contrary to their needs, the LMS used by the university was perceived to be not very user-friendly. Although tools like discussion forums and wiki were cited as useful for peer assessment which is in line with Gikandi, Morrow and Davis' (2011) account of LMS, the overall structure was deemed counterintuitive.

In response to the question about aiding technical developers or technology, professors generally believed that developers should attempt to use themselves what they created to get a first-hand experience of how a user would feel using them. Professors stressed the need to get more control making it more flexible for them to use the tools according to their own needs and customized to their style.

The single most cited element of technological tools which make them effective for formative assessment was quick and detailed feedback that professors can provide to their students. However, inflexibility to cater to different instructors needs and limited question types within one software application were the biggest limitations.

Some of the main institutional environmental factor which affect professors' willingness to use assessment tools formatively were adequate technical support, recognition from administration, training with the technological tools, and positive policy creation. Moreover, the results indicated the significance of perceived ease of use and perceived usefulness in managing the relationship of technical support with professors' attitude towards LMS. Importing from or linking other technology tools used for assessment was a task most professors deemed difficult or considered themselves technically unequipped.

Most of the respondents confirmed that a faculty culture needs to exist which is more inclined to use technological tools for formative assessment. The need to establish a supportive culture was a key theme. The majority of participants echoed the idea that sharing best practices and success stories related to their experiences in using technology for formative assessment was very important.

Factors that motivate professors to use formative technology assessment tools are: possibility of providing more and timely feedback to students as well as more modes of providing feedback like video and audio (which can be repeatedly accessed by students). Some professors also mentioned peer feedback as a factor which draws them to using technology for formative assessment purposes.

Conclusions

Teachers' contribution to the developments process of certain features of LMS to provide pedagogical depth can be further investigated. This can help the development companies produce

better solutions and help teachers and students with more streamlined feedback mechanism. Considering these insights, teachers can provide the needed scaffolding to facilitate the use of formative assessment using technology in general.

Another implication of advancement of knowledge from this study is how the field of blended learning can benefit. Blended learning, which is often seen as 21st century pedagogy for universities (Cheung & Hew, 2011), heavily depends on software like LMS to conduct mainly its out-of-class activities and pedagogy. Or blended learning instructors to engage their students in higher-order and critical thinking through formative assessment, this study can provide a path forward and act as an important building block towards improvement

Although this study strives to shed light on teacher's perceptions about use of assessment tools in LMS, students' perceptions about the type, amount and quality of feedback they receive through the LMS was outside the scope of this study. As well, administrators' goals and challenges could also be delved into to understand how their decisions are impacted by their knowledge of features of LMS and perceptions of both professors and students about the efficacy of these features.

This study will open up more avenues for future research based on the expected findings. Follow up studies can be done to envisage students' and administrators' perceptions about the effectiveness and challenges of assessment tools for formative purposes in LMS. Further studies can also be done to understand the processes by which teachers can use the tools more effectively. The design of the survey could be easily adapted and extended to other contexts and other higher education institutes. Similarly, it could be expanded to include other LMS or broadly, more e-assessment tools.

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Augmented Reality in Language Education: A Systematic Literature Review

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Abstract

Rapid advances in technology have altered the way of language education. Technological tools, when effectively integrated with appropriate pedagogical foundations, can enhance the quality of teaching and learning experiences. Augmented reality (AR) has emerged as one of the technologies offering a new way to bridge virtual and real worlds. Investigating both benefits and challenges that AR technology can bring to language classrooms, this systematic literature review analyzes recent studies pertaining to the incorporation of AR technology in language education. More specifically, the paper (1) introduces AR and its related terminologies, (2) discusses both the potentials and constraints of AR in language education through in-depth analysis of relevant studies, and (3) proposes ideas for practical implications and future research in the field.

Keywords: augmented reality, digital learning, language education, mobile learning, mobile application, technology in education

Introduction

Advanced technology is permeating academic settings including language education. Rapid advances in technology has altered the face of language education. Technological tools, when effectively integrated with appropriate pedagogical foundations, can and should enhance the quality of teaching and learning experiences. Augmented reality (AR) has emerged as one of the latest technologies offering a new way to bridge virtual and reality worlds. AR is defined variously; however, the widely cited definition of AR originates from Azuma (1997): an emerging technology that blends virtual images with real environment. The term is then elaborated by Mohn (2015) as “any technology that inserts digital interfaces into the real world” (p. 1). Mohn (2015) states that like virtual reality (VR), AR can be experienced through headsets and glasses, but it is more used with mobile devices such as tablets and smartphones. He further predicts that wearable devices (e.g., watches, contact lenses) can be a promising ideal platform for AR technology soon.

The applications created by AR enable the usage of three-dimensional models (i.e., 3D objects, images, videos and animations) both separately and simultaneously (Wang et al., 2013). There are currently two developed systems of AR: (a) location-aware AR and (b) vision-based AR (Dunleavy & Dede, 2014; Pence, 2011). Location-aware AR allows the users to track the distance from the current place to different ones by using a mobile device enabled with Global Positioning System (GPS). This form of AR is presented by the multimedia (i.e., the combination of text, audio, image, animation, and/or 3D objects) to modify the navigation to the specific location. Vision-based AR, on the other hand, “is focused on image recognition techniques used to determine the position of physical objects in the real environment for appropriate location of the virtual contents related to these objects” (Wojciechowski & Cellary, 2013, p. 572). Vision-based AR can be divided into two categories: maker-based (which requires specific labels such as quick response code to register the 3D images of the objects on the real-world object) and markerless tracking (which requires no such labels, that is, any part of the real environment can be used to trigger the virtual images).

Mobile AR technology has gained an increasing research attention since it has innumerable benefits in language education. Not only does it allow real-time interaction but it also provides learning through experience, which can boost users' attention and motivation (Ibanez et al., 2014; Singhal et al., 2012). This is particularly important in language education since learning lies in communication and interaction. Concerning motivation and attitude in language learning, multiple studies have been conducted to prompt language learning in an engaging and motivating environment (Cascales, Laguna, Pérez-López, Perona, & Contero, 2013; Cheng & Tsai, 2014; Wu, Lee, Chang, & Liang, 2013). Additionally, more studies have been conducted to investigate the effectiveness of AR as multimedia in optimizing students' performance (Cadavieco, Goulão & Costales, 2012; Liu & Tsai, 2013; Santos et al., 2016). In particular, AR facilitates the presentation of visual information (Santos et al., 2016). Visual information paves the way for language education and supplies learners with the ability to visually experience. Accordingly, it eases the learning experience and allows for an increase in cognitive attainment. Fujimoto et al. (2013) reported that AR allows for better memorization since it contributes to decreasing the cognitive load. AR technology can also be combined with global positioning system (GPS)-enabled smart devices or quick response (QR) codes to create a unique, compelling and meaningful learning experiences (Lara-Prieto et al., 2015). Students can gain access to their smartphones, scan the codes and reach the 3D demonstrations in front of their eyes in no time.

Major challenges of AR, however, emerge from the fact that AR technology itself is still in the initiation form (Wu, Lee, Chang, & Liang, 2013). There are a limited number of AR apps or AR-connected devices available for teachers and students to apply in real-life classroom settings. Another considerable challenge is that the cost for AR implementation is not low (Alkhatabi, 2017; Wu et al., 2013). It is also necessary to take into consideration the AR knowledge of teachers. As AR is a recently emerging technology, conceivably not many educators know or hear about it. Educators may be familiar with AR technology, nonetheless they still hesitate applying it into language classroom due to their concern about the usability, convenience and maintenance of the technology as well as lack of proper training in IT knowledge and skills (Alkhatabi, 2017). Wu et al. (2013) also caution that second language learners can be cognitively overloaded while working with AR technology. Indeed, it will be difficult for them to navigate the new language input in such scenario. Yet another major concern is that the current available designs of AR content are still not flexible or diverse enough to pique the interests and befits the demands of various students (Dunleavy, Dede, & Mitchell, 2009; Wu et al., 2013).

AR Theoretical Frameworks

Situated learning theory and Constructivist learning theory are the two evident theoretical foundations for AR technology (Dunleavy & Dede, 2014). Situated learning theory (proposed by Brown, Collins, & Duguid, 1989), which has been built up on Sociocultural theory of Vygotsky (1978), asserts that learning in general and language acquisition in specific take place in a certain context and that mutual interactions among the participants, objects, and cultural aspects within that context can help boost the learning performance. AR creates a mixed-reality environment in which the users experience, interact, complete the learning task, solve the problem, and apply what they have learned to other similar situations.

Culture is an integral part of language education. When learning English, students may become aware of the culture of the target language. As soon as people immerse themselves in a language and its culture, a quality learning takes place (Baker & Macintyre, 2000). In light of this, Baker and Macintyre (2000) also stated immersion is particularly important since it can lead to better

communication. Thus, it is imperative for educators to immerse their students in the language and culture. To achieve this, educators can and should incorporate emerging technologies such as AR into language education to fulfil immersion. As such, AR superimposes virtual layer onto reality which reflects a sense of immersion (Yang & Liao, 2014).

Constructivist/Interpretivist advocates, on the other hand, posit that the individuals along with their prior knowledge and sociocultural background play a more critical role than the context by itself (Dunleavy & Dede, 2014; Vygotsky, 1978). In an AR environment, learners not only establish their personal interpretations of the immersive interfaces according to their own life experiences but also interact with their virtual or real-life partners to negotiate the meaning of the multimedia presentations and construct new context-appropriate comprehension (Dunleavy & Dede, 2016). AR technology, when utilized meaningfully, binds tightly with Situated learning theory and Constructivist learning theory in that it creates an interactive learning environment in which learners can both make sense of the real world and apply what they have gained to the augmented learning environment with the presence of the multimedia aiding as scaffolding, background knowledge activator, motivator, and facilitator.

Game-based learning seems to implicitly guide AR design for educational purposes as well. Games have for long been integrated in language education. Multiple studies have investigated the impact of games on students' learning. Lontas (2016) pinpoints how educators can infuse games in their classrooms, but warns that educators need to accommodate certain needs and follow pertinent rules for the betterment of learning. AR-infused games have been expansively harnessed to develop vocabulary learning in language education. King (2016) utilized Pokémon GO, a popular AR-infused game, to improve vocabularies regarding characteristics and appearance. This AR-based game has also been investigated in another inquiry (Schrock, 2016) as a tool to help students develop digital storytelling.

Notwithstanding the advantages that AR technology can bring to language classrooms, there have been only a few reviews of the literature exploring the applications of AR in education in general, and none in language education in specific so far. Therefore, this systematic literature review aims to thoroughly analyze recently published studies pertaining to the incorporation of AR technology in language teaching and learning settings. Specifically, the paper attempts to describe recent developments in the use of AR technology, its educational advantages as well as limitations both inside and outside language classrooms by contributing to the existing literature and providing English language educators with an overview of research findings. It is also hoped that language educators and teachers will be equipped with practical ideas on how to better integrate AR to improve their teaching and learning. To achieve that, the following research questions were crafted to lead our inquiry:

- What are the affordances of AR in language education?
- What are the learning and affective outcomes achieved with the aid of AR in language education?
- What are the constraints of AR in language education?
- What is potential future research for AR in language education?

Methods

Inclusion and Exclusion Criteria

Several researchers have proposed different definitions of AR. For example, El Sayed, Zayed, and Sharawy (2011) assert that AR enables the addition of missing information in real life by adding virtual objects to real scenes. Supporting this definition, Chen and Tsai (2012) posit that AR allows for interaction with 2D or 3D virtual objects integrated in a real-world environment. These definitions are based on one of the features of AR that is the possibility of superimposing virtual information to real objects. However, a broader perspective has been employed in the study of Wojciechowski & Cellary (2013). They define AR as “an extension of virtual reality with some advantages over virtual reality.” (as cited in Bacca et al., 2014, p. 133-134). Dunleavy (2014) defines AR as “an emerging technology that utilizes mobile, context-aware devices (e.g., smartphones, tablets) that enable participants to interact with digital information embedded within the physical environment” (p. 28). Multiple researchers have broadened the definition of AR beyond this vision; nevertheless, we adopted the one proposed by Azuma (1997). Azuma et al. (2001) further described three key properties that AR possesses: “(1) combines real and virtual objects in a real environment; (2) runs interactively, and in real time; and (3) registers (aligns) real and virtual objects with each other” (p. 34). This definition bears the crux of AR which undergirds almost all the studies conducted to date. Additionally, the definition is well grounded and corroborated by the studies that we critically analyzed.

Drawing on the goal of our literature review, we conducted the search on major technology-related journals (e.g., CALICO, Computer & Education, Research & Practice in Technology Enhanced Learning, etc.) among the latest peer-reviewed studies on AR and its application in language education. We planned to examine how AR has been applied in a broad range of educational settings. Accordingly, we set out to include the pertinent studies with all age ranges and different language proficiency levels. Our quest attempted to investigate the pertinent articles in a broad realm of language education to encompass all the relevant studies. Similarly, we developed the following criteria to guide our article selection process:

- The articles had to be an empirical study including conference papers and published ones; this excluded literature reviews or how-to-do papers. The articles had to be peer-reviewed to guarantee the quality.
- The article had to focus on AR, QR codes and the pertinent topics in language education, that is, language teaching and learning, not other subject matters.
- The article had to have been published between 2007, that is, when AR in education began (Akçayır & Akçayır, 2017) and 2017 so that it can portray a complete picture of up-to-date studies. Further, the window of time is restricted to the last 10 years since the use of emerging technologies such as AR has gained popularity during the last decade.

Search Strategies

There were two main phases during the manuscript selection process. In the first phase, a large pool of articles were searched through education-related databases such as ProQuest and ERIC (Education Resources Information Center) using search terms “augmented reality in language education”, “augmented reality in language teaching”, “augmented reality in language learning”, “augmented reality in language classrooms”, and “augmented reality in language skills”. With the limited result (only about 10-15 potential studies) for the search of each term, we decided to extend

our search among important journals within the field that were indexed in the databases. For the second phase, nine journals were selected as follows:

- British Journal of Educational Technology
- CALICO journal
- Computers & Education
- Computer Assisted Language Learning
- Journal of Educators Online
- Language Learning & Technology
- Literacy Practice & Research
- Modern English Teacher
- Research & Practice in Technology Enhanced Learning

After cross-checking between the two researchers, 19 relevant empirical studies that met the literature review inclusion criteria were selected for further in-depth analyses.

Study Features Coding and Analyses

Key coding terms that align our research questions consist of (1) AR technology used in the empirical studies together with learning environment so that we can synthesize the affordances that AR brings to the language classrooms; (2) participants' demographic information (e.g., language level, technology skills) with outcome measure source are analyze to gain the learning outcomes with the aid of AR, (3) any constraints that prevented the optimal learning outcomes, and (4) AR future research suggested by selected studies.

During the first stage, two researchers coded separately and filled out the coding sheet according to the key coding terms. After completing all of the selected studies, cross-checking was conducted to maintain the objectivity of the review. In case any concern or conflict arose, two researchers read the studies and discussed how to code them together until reaching the final agreement. The findings were displayed mainly by visual illustrations through tables, graphs, and charts coupled with detailed description to provide comprehensible answers to the four major research questions. Any interesting themes that emerged from analyses were also discussed to provide researchers and educators with current trends of AR in language education along with ideas for future research.

Results and Discussion

The distribution of methodological approaches, publication time, and journals among the reviewed studies

For the purpose of this review, we identified qualitative, quantitative, and mixed method adopted among the selected studies. Figure 1 displays the methodological approaches employed to conduct the articles. From the pool of articles from 2007 to 2017, mixed method took the lead with 8 articles. Approximately, the same number of inquiries employed qualitative inquiry (5 articles) and quantitative inquiries (6 articles) as shown in the pie-chart. These findings suggest that mixed method is still a commonly used method among AR studies in educational settings, which are consistent with those of other AR-relevant literature reviews (Bacca et al., 2014; Koutromanos et al.; 2015).

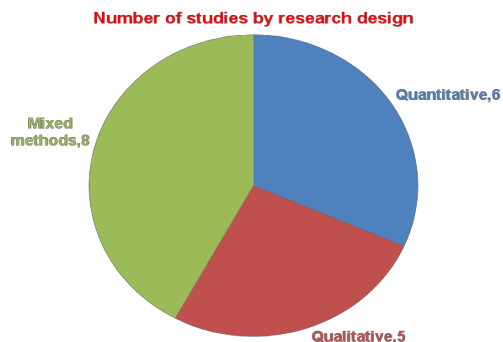


Figure 1. The number of studies by research design

Figure 2 illustrates the distribution of articles over the last decade (2007-2017). Although this systematic literature review does not intend to portray a historical development of research on AR, the figure may give us an in-depth understanding of the state of the current research on the topic under review. As shown in the bar chart, there is only one study in 2007. It somehow makes sense as Akçayır & Akçayır (2017) found that AR research in education just began from that year. This is followed by a gap of 3 years in the studies germane to the incorporation of AR in language education. These gap years could imply the skepticism of researchers toward newly emerging technology tools and their application in educational settings at the time. Nevertheless, studies on AR in language education have an upward trend from 2011 to 2013. AR-related studies reached a peak of 4 studies in 2014 with a variety of methods (3 qualitative and 1 quantitative). In this sense, 2014 can be considered a turning point for AR-pertinent research. For one thing, the rising popularity of AR in 2014 might be pertinent to exploring the affordances of AR in language education which will be discussed in detail. The bar chart also shows that studies on AR in language education had a tendency to decrease from 2014 onward. In the past three years, there has been a steady number of studies (2-3 studies per year) regarding AR and language education. This, in turn, corroborates that the integration of AR in language education has recently come to fruition and gained popularity. Notwithstanding the number of studies, the type of methodology embraced in the mentioned inquiries illustrates that having investigated the topic qualitatively, quantitative analysis of AR has plagued the field of language education.

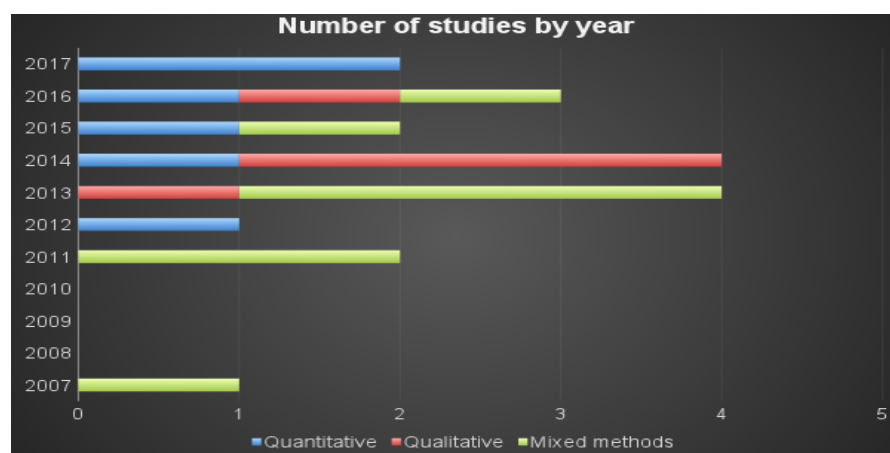


Figure 2. The distribution of articles by year

We based our selection on the systematic review of articles that warranted a more in-depth and detailed analysis. In this regard, Figure 3 indicates the distribution of articles by journals. As

illustrated in the pie chart, the selected articles that met our criteria were retrieved from a wide range of journals. The top-three among them include Computers and Education (4 articles), Procedia-Social and Behavioral Sciences (3 articles), and British Journal of Educational Technology and papers presented at conferences (2 articles per each category). The remaining of the journal outlets published just one article concerning AR and language education in the past decade. This pie chart succinctly identifies a gap in the AR-related publication when it comes to language education.

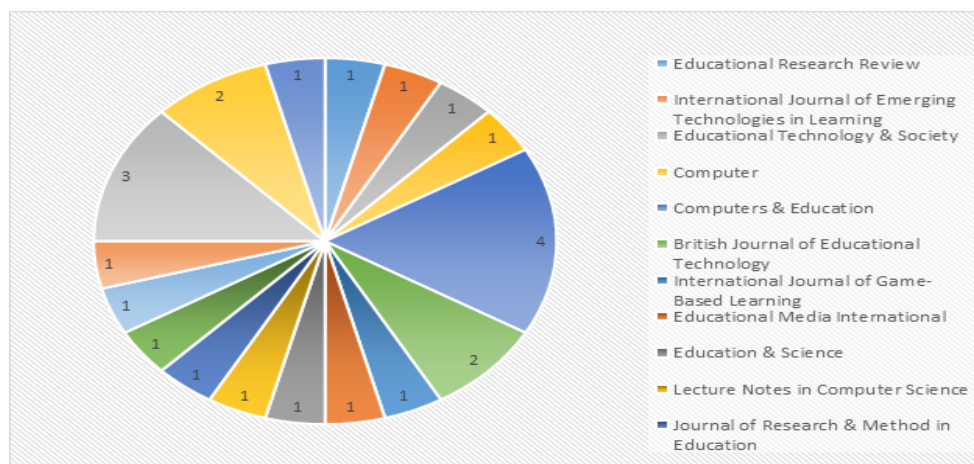


Figure 3. The distribution of articles by journal

Demographics of Participants Among Reviewed Studies

To date, there have been sparse literature regarding the participants of the studies in AR studies. The analysis of the demographics of participants, as shown in Figure 4, illustrates that AR studies in language education are predominantly concerned with either college students or K-12 with 43%. Other types of participants such as pre-K young learners include only 9% of the studies. Five percent of the selected studies did not specify their participants as they focused on the practical issues of AR. Similar to the findings of Akçayır & Akçayır (2017), there is a diversity among participants of AR studies. Our current review, however, suggests more AR potentials for those who are almost or fully developed in cognition rather than pre-K kids. According to Piaget (1964)'s stages of cognitive development, young learners at elementary levels and adolescents at their concrete operational stage need to use multiple senses (e.g., seeing, hearing, touching, etc.) in order to make a full sense of the new knowledge. Hence, AR can offer a powerful visualization feature during the cognitive development of this group. Another possible explanation why K-12 students are the preferable sample group for AR research is that a majority of young learners enjoy playing digital games including AR-based ones. The findings of two reviewed studies (Barrira et al., 2012; Hsu, 2017) both support the positive effects of AR-based games on learning performance, especially vocabulary retention among the third graders.

The same high percentage of college participants also indicate the potentials of AR among this group. In particular, the study of Liu, Holden, and Zheng (2016) has proved that the AR-based game not only helped enhance undergraduate students' linguistic and communicative competence, but also their cultural understanding. Our current analytical review confirms the report of Akçayır & Akçayır (2017) that there is a shortage in AR research conducted among students with special needs. So far, there is none study focusing on this particular group, which addresses a noticeable gap in the field and calls for further research to bridge the gap.

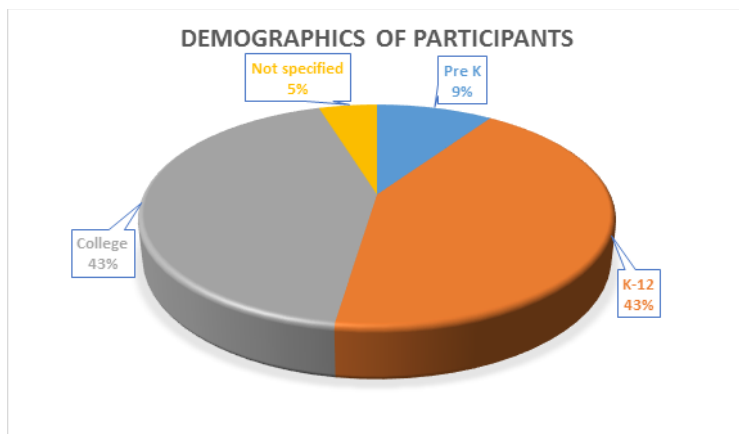


Figure 4. The demographics of the participants

As illustrated in Figure 5, the number of studies, which investigate and explore different aspects of language learning has been on the rise in the past few years. However, there has been scarce report in relation to the language of participants and the languages learned via emerging technologies such as AR. The analysis of articles in this study highlights that most studies recruited students with a background in Taiwanese, Portuguese, Turkish, and English as their first language with 4, 3, 2, 2 studies, respectively. As such, AR studies scrutinized 4 languages in detail and other students with different mother tongue seem to be understudied. Similarly, English stands at the top of the list of languages learned with 17 studies in total. Spanish language, with two studies, come in the second place. This then comes as no surprise that most studies are conducted in non-English speaking countries such as Taiwan with the hope of developing English proficiency.

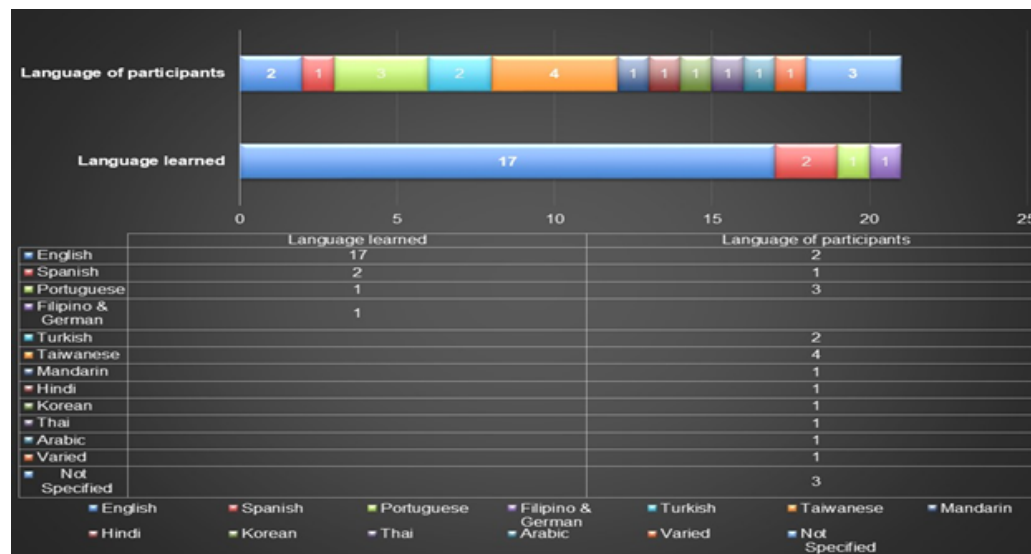


Figure 5. Languages of participants and languages learned

Thematic Foci, AR Affordances and Its Educational Benefits Among Reviewed Studies

Thematic Foci

The focus of AR studies has been on different aspects of language education (see Figure 6). The majority of the studies explored the impact of AR on literacy (7 articles). Following literacy,

vocabulary comes at the second place with 4 articles. Finally, game-based AR and AR in class each with 3 articles are followed by other types of topics: attitude and cognitive load (1 article); immersive learning (1 article); culture and communication (1 article); and peer interaction (1 article)

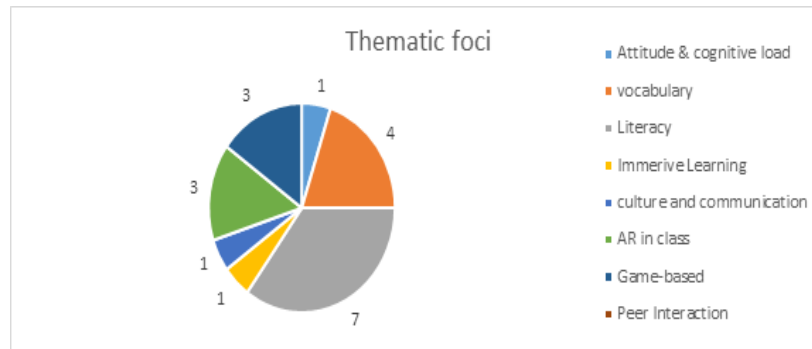


Figure 6. Thematic foci of the articles

AR Affordances in Language Education

Wu et al. (2013) highlighted the critical role of technology in AR applications. Table 2 displays a wide range of AR technologies currently available in the market. Some of the popular ones across the reviewed studies include AR pop-up books (in 7 studies); AR-based games (in 4 studies), and Aurasma app to create vision-based AR (in 3 studies). It may not be surprising that mobile AR is the most commonly preferred delivery method (in half of the studies reviewed) for its convenience and cost-effectiveness compared to bulky laptops or expensive tablets. Specific studies support that mobile devices are considered an ideal platform for AR applications (Holden & Sykes, 2011; Liu, Tan, & Chu, 2010; Liu & Tsai, 2013). Specifically, in Taiwanese context, Liu et al. (2010) designed a handheld augmented reality mobile English learning system (HELLO) that provide learners with reachable context-aware learning materials.

Table 1. The Number of Studies by Type of Technology Used and Type of Learning Approaches

Type of AR technologies	Whole class teacher-directed	Groupwork/Parent-child interactive learning	Individualized learning/Self-directed learning
Aurasma Wikitude	Pilton (2014)	Chiang, Yang, & Hwang (2014) Liu & Tsai (2013); Reinders & Lakanchua (2014)	Pilton (2014)
ARBlocks			Silva, Roberto, & Teichrieb (2013)
AR pop-up (text)books	Billingshurst & Andreas (2012); Küçük, Yılmaz, & Göktaş (2014); Alkhatabi (2017); Solak & Cakir (2015)	Cheng & Tsai (2014, 2016)	Cascales, Pérez-López, Perona, & Contero (2013)
AR games	Santos et al. (2016)	Barreira et al. (2012); Chen, Ho, & Lin (2015)	Hsu (2017)
QR codes	Chen, Teng, Lee, & Kinshuk (2011)		Liu, Tan, & Chu (2007)
ZooBurst ARIS (Augmented Reality for Interactive Storytelling)		Liu, Holden, & Zheng (2016)	Mahadzir & Phung (2013) Holden & Sykes (2011)

As shown in the table, AR technology can also be utilized in a variety of learning approaches ranging from whole class teacher directed instruction (in 7 studies), interaction with peers or parents (in 7 studies), to self-directed learning (in 7 studies). There seems to be a fair distribution of AR use in these learning approaches across the reviewed studies. In certain studies, such as

Pilton (2014), learners experienced a combination of teacher's instruction as guidance and scaffolding with their own individualized learning as a self-discovery process. The findings of Hsu (2017) suggest that AR has positive impacts on learning performance regardless of which type of AR (i.e., task-based or self-directed learning) adopted.

AR Educational Benefits

After coding stage, identified advantages of AR were classified into two core groups: (1) affective outcomes and (2) learning outcomes. Affective outcomes focus on learner motivation and attitude toward AR integration into language classrooms whereas learning outcomes consist of a number of sub-categories such as cognition load, language performance and higher-order thinking skills (e.g., inquiry learning, creativity). Cultural understanding along with cooperative skills also plays a key role in efficient performance of language learners.

As shown in Table 2, vision-based AR is the most used type of AR across a majority of the reviewed studies, especially regarding learners' motivation and their language performance. Not only do the learners feel self-motivated by AR learning experience, but they also share this motivation with their peers or parents during the shared reading time. The studies of Cheng & Tsai (2014, 2016) support the effectiveness of shared AR picture books between parents and their children. The parents in the study felt more motivated to read the AR books with their kids, which led to better learning in the child and instilled more positive attitudes in the children-parent relationship, which corresponds with the results of Küçük et al.'s (2014).

Table 2. Characteristics of the Reviewed Studies

		<i>AR types</i>		
		<i>Location-aware</i>	<i>Vision-based</i>	<i>Mixed</i>
Affective outcomes	Motivation/ Learner Attitude	Liu & Tsai (2013); Holden & Sykes (2011); Reinders & Lakanchua (2014)	Cascales, Pérez-López, Perona, & Contero (2013); Chen, Teng, Lee, & Kinshuk (2011); Chen, Ho, & Lin (2015); Küçük, Yılmaz, & Göktaş (2014); Mahadzir & Phung (2013); Santos et al. (2016); Solak & Cakir (2015)	Alkhatabi (2017); Liu, Holden, & Zheng (2016); Pilton (2014)
	Cognition load		Cheng & Tsai (2014, 2016); Küçük, Yılmaz, & Göktaş (2014); Hsu (2017)	Pilton (2014)
	Language performance (vocabulary retention, skill-based competence)	Liu & Tsai (2013); Chiang, Yang, & Hwang (2014); Reinders & Lakanchua (2014)	Barreira et al. (2012); Billingham & Andreas (2012); Cascales, Pérez- López, Perona, & Contero (2013); Chen, Teng, Lee, & Kinshuk (2011); Chen, Ho, & Lin (2015); Liu, Tan, & Chu (2007); Küçük, Yılmaz, & Göktaş (2014); Hsu (2017); Santos et al. (2016); Silva, Roberto, & Teichrieb (2013); Solak & Cakir (2015)	Alkhatabi (2017); Liu, Holden, & Zheng (2016); Pilton (2014)
Learning outcomes	Cultural understanding	Holden & Sykes (2011); Reinders & Lakanchua (2014)		Liu, Holden, & Zheng (2016)
	Creativity	Liu & Tsai (2013)	Cascales, Pérez-López, Perona, & Contero (2013)	
	Cooperative skills	Chiang, Yang, & Hwang (2014)	Chen, Ho, & Lin (2015)	
	Inquiry learning	Chiang, Yang, & Hwang (2014)		

In terms of learning gains, vision-based AR is also a preferable tool to develop learners' particular skills, especially in writing and language areas such as vocabulary retention and spelling improvement across the reviewed studies. In Malaysia, Mahadzir and Phung (2013) developed a

collection of AR pop-up books with ZooBurst, and then had five primary students experience learning English with the aid of these books during recess time in the school library. One of the books was to teach the learners about animals and their sounds when the page popped up and showed different 3D images of familiar animals (e.g., cat, dog, horse, duck, etc.) and sound icon where the students could interact with to hear the real sound of these animals. Other books focused on English grammar topics and practice quizzes.

From different perspectives of the reviewed studies, cognition load is also an interesting aspect to be placed under scrutiny. While the findings of several studies indicate the aid of AR in reducing cognitive load of the students (Cheng & Tsai, 2014; Hsu, 2017), these results require further exploration as Wu et al. (2013) warn that AR technology can cognitively overload second language learners. Due to limited number of studies in this aspect, strong conclusion or generalization of the results needs to be made with caution. These aspects of AR, accordingly, must await further empirical inquiry.

From the table, although it is not noticeable as affective and learning outcomes that AR can offer, applying AR to enhance cultural understanding and higher-order thinking skills can be observed in a number of reviewed studies. In the study of Liu et al. (2016), an AR mobile game, Guardians of the Mo'ō (who is a gecko or Lizard Goddess in Hawaiian culture) was created to provide the learners in Mānoa, Hawai'i with a new engaging learning environment in which they could interact with both virtual world (e.g., virtual drawings, notes, etc.) and physical world (e.g., trees and artworks on the campus) to promote their active language learning, raise linguistic awareness and exchange cultural aspects. Based on conversation analysis and multimodal analysis, they found out that learner active learning took place through their collaborative negotiation and coordination among team gamers in order to solve the problems together.

Constraints Imposed by AR in Language Education Among Reviewed Studies

Despite the educational benefits AR can offer to language teachers and learners, researchers have reported a number of constraints imposed by AR technology as illustrated in Table 3. The common challenge is the complication to create and operate AR technology even for the teachers. In the study of Reinders and Lakanchua (2014), the researchers experienced some technical difficulties with Wikitude; therefore, they had to use other user-friendlier tools for the college students to create an AR-based virtual tour. During the trial and error stage, much time was spent on figuring out how to operate the tool, which caused frustration among a majority of the participants. More than that, the creation activity took more time than the researchers had expected, which made some students lose their motivation and want to give up.

As observed in several studies (Barreira et al., 2012; Liu et al., 2007; Mahadzir & Phung, 2013; Santos et al., 2016), short length of time for AR intervention is another big concern about the sustainability of AR application in the classroom. Intervention time ranges from 20-30 minutes to 3-4 weeks; those that were only conducted in a very short time, that is, less than 30 minutes can raise a critical question about the quality of the intervention as well as validity of the study per se. The availability of ready-made AR technology and the cost of certain AR learning materials are also a hindrance to the willingness to implement AR in language classrooms as reported in the studies of Holden and Sykes (2011), Liu et al. (2016), and Alkhatabi (2017). Investigating teachers' perceptions and attitudes toward AR integration, Alkhatabi (2017) found out that although a majority of the participants was aware of the existence of AR technology and its

educational potentials, they still hesitated to apply it in their own class owing to the shortage of ICT facilities and sufficient training how to use the tool effectively.

Another potential issue is that AR may cause cognitive overload of the learners as warned by Wu et al. (2013). The results of Cheng and Tsai (2013) suggest that AR could lead to the participants' loss of motivation and increase in cognitive load due to the complexity of the learning tasks and AR technology itself.

Table 3. Major Constraints of AR Among the Reviewed Studies

<i>Constraints</i>	<i>Studies</i>
Technical issues with AR apps	Reinders & Lakanchua (2014)
The shortage of AR-based materials	Holden & Sykes (2011); Liu et al. (2016)
The cost of ready-made AR available in market	Alkhatabi (2017)
The complication to create and operate AR technology	Cheng & Tsai (2014); Chiang et al. (2014); Reinders & Lakanchua (2014); Pilton (2014)
Much time spent on AR-based learning activities without significant effect or followed by negative impact on learning and motivation	Chen et al. (2011); Reinders & Lakanchua (2014)
Short length of time of the intervention	Barreira et al. (2012); Liu et al. (2007); Mahadzir & Phung (2013); Santos et al. (2016)
Lack of ICT infrastructure	Alkhatabi (2017)
Lack of proper ICT training for teachers	Alkhatabi (2017); Silva et al. (2013)
Teachers' perceptions and attitudes toward AR application in the classrooms	Alkhatabi (2017)

Conclusions

The future of AR in language education is promising: The findings of this review show that starting from 2007, research on AR in the field has gradually grown over time since 2011, and particularly expanded the last five years. These results not only correspond well to those of Akçayır & Akçayır (2017), which reviewed studies on AR in education in general, but they also strengthen the prediction made by Horizon Reports (2006) that AR would become a trend in educational settings and gain increasing attention from researchers in the long term. More recently, AlleyWatch site (2014), the largest organization in New York that introduces technologies for educational purposes, announces that AR technology is paving its own way to make an innovation in language teaching and learning.

Thorough scrutiny of a body of selected studies has suggested that AR has numerous educational advantages in language teaching and learning. Yet, a number of conflicting findings can be observed from several studies, especially those on the correlation between AR implementation and learner's cognitive load. Similarly, some researchers reported the ease of use of certain AR applications whereas the other experienced technical difficulties and complexity of this emerging technology. Along with potential constraints imposed by AR, there are also a few noticeable pedagogical concerns (e.g., sustainability of the application in a big class in a long term, teachers' lack of adequate training, insufficient class time) that need to be taken into careful consideration. Nevertheless, the findings of most of the reviewed studies indicate unique affordances that AR can offer to support both teaching and learning, which outweigh the existing constraints. Some issues such as technical errors can be fixed by the modification and development of technology in the future. Last but not least, the gaps in the literature can only be resolved by further research which will be discussed in detail in the following section.

It is undeniable that AR is still in its infancy, and thus, the evidence of the effectiveness of AR is limited. It is imperative that researchers seek the following topics in their future studies: comparing different types of AR, developing AR-task based model, utilizing AR for 4 skills in language

learning. As such, conducting AR-infused empirical studies with adult language learners on four skills as well as sub skills are highly recommended. As AR-related studies have inextricable links with task-based language teaching (TBLT), this model of teaching should be extensively employed in the AR-related studies. In this sense, TBLT must await further research to confirm/disconfirm its effectiveness when harnessed with technology.

As discussed earlier, AR has been integrated in literacy. However, there is little or no study regarding the incorporation of AR in other skills such as listening, speaking, and writing. Notwithstanding the language skill, more empirical studies should be conducted on the impact of AR on the language skills. To date, several studies highlighted divergent aspects of AR authoring tools, technical issues in design, and usability. As such, it is imperative to conduct more empirical studies to explore oft-neglected aspects of the use of AR in language education.

One of the major drawbacks of AR-infused studies is that educators are predominantly unfamiliar with emerging technologies such as AR and it is unlikely to have learning gains. We recommend that more material is designed followed by empirical studies. This way researchers can explore the attitude, motivation, and perceptions of both educators and students toward AR-infused material. Qualitative aspects aside, researchers can quantify cognitive achievements through AR in learning different skills with one material. It appears that material development is understudied when it comes to AR and other emerging technologies.

As explained, there are two types of AR (vision-based and location-aware). All the studies that we analyzed considered either vision-based or location-aware type of AR. Accordingly, these two types of AR are solely oft-cited in the related literature. However, it appears that more studies to compare and contrast the two types and uncover the hidden sides of them. Further, researchers should compare the two types of AR across age groups with more participants. All through the literature, studies did not use convincing number of participants in quantitative studies to reassure a high power in generalizations. Recruiting more participants in quantitative studies is reiterated. It is hoped that more studies in AR coupled with material design in this field can culminate in enriching and growth in the literature.

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The Effect of Incorporating Animated Pedagogical Agents in Apps on L2 Idiom Acquisition and Retention

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Abstract

Multiple studies have tried to explore effective ways to improve idiomatic language learning in L2 acquisition by uncovering idiom recognition and comprehension in native speakers to take it as a model for L2 acquisition. Recent studies have focused on a variety of methods and tools to facilitate idiom acquisition, empower recognition, and recall skill: animated, unanimated (funny) pictures, mobile learning, multiple intelligences, natural text recognition and its relations with web 2.0, Disney movies, etymological tools, and software are among the most recent ones. Although these studies have provided Second Language Acquisition (SLA) field with significant and generalizable findings, we are yet to afford language learners with an effective software to facilitate idiom acquisition utilizing different affective and cognitive elements. To fill in this gap, this library research aims at proposing the development of an effective software of idiom acquisition to uncover learner's prior knowledge, facilitate retention, and recall of idioms within a proposed software considering the role of emotion and interest (Gadanhó & Hallam, 2001).

Keywords: animated pedagogical agent, L2 idiom acquisition, software

Introduction

This study examines, analyzes, and synthesizes a variety of articles regarding idiom learning and acquisition to propose a software, which considers social, cultural, and linguistic background of students to aid idiom acquisition. To that end, the author will first discuss the definition of idiom competence and considers a type of idiom known as vivid idioms (Liontas, 2002) as a starting point. Second, several hypotheses for idiom retention will be delineated and the article then details the reasons why teachers need to teach idioms to direct the reader toward the concept of Conceptual Sematic Image (CSI) distance and its implications in idiom teaching. Third, recent idiom learning software is scrutinized to find their drawbacks in idiom learning and motivating students. Finally, based upon the mentioned discussion a new version of idiom learning software is proposed to facilitate idiom acquisition while familiarizing learners with the target culture and taking motivation and interest into account.

Literature Review

The Definition of idiomatic competence is the point of departure in the present paper. Liontas (2002) describes idiomatic competence as "the ability to understand and use idioms appropriately and accurately in a variety of sociocultural contexts, in a manner similar to that of native speakers, and with the least amount of mental effort." (P. 72). What Liontas introduces into the realm of Idiom acquisition is what teachers are longing for in teaching idioms. Liontas (2007) speaks to the importance of L2 learner's ability to identify vivid idioms while reading texts. Later on, a model of software will be proposed by the author to facilitate identification of vivid idioms.

I confine myself with a simple definition of idioms, as I do not intend to provide readers with a new definition but a working definition of idiomatic competence and a practical way to integrate technology into the idiom learning process to make learning both easy and fun.

Idioms and idiomatic phrases are intriguing for learners to acquire. It is roughly estimated that there are over 10000 idioms in English, some relatively new, still others may date back to 2000 years ago (Brenner, 2011). Most teachers, linguists, and poets corroborate that there is tremendous power in idioms to provide the audience with vivid descriptions.

Example:

Oh my God! I am all wet

Why?

It is raining cats and dogs out there.



Source: <http://openclipart.org/homepage>

Figure1. The image of “It is raining cats and dogs”

The above picture seems to be self-explanatory regarding the importance of recognition and usage of idioms. It directly comes from my experience and many other teachers that language learners complain about the figurative meaning of idioms. Many might wonder “ what does this has with cats and dogs, how may I know what this means”. Regarding the fact that learners might know each and every single building unit of an idiomatic phrase, yet they end up with the wrong meaning and they may never arrive at the figurative meaning. Zyzik (2011) believes that formulaic language accounts for a considerable portion of linguistic competence. Accordingly, language learners seem to be bound to learn idioms.

Why Teach Idioms?

Since idioms are such a big part of English, students should learn them in order to be fluent in the target language. Burke (1998) claims that there is “absolutely no way a nonnative speaker of English could fully understand an American movie, TV show, news broadcast, or even a typical conversation without help because our language is loaded with nonstandard English, i.e., slang and idioms” (P. 1). Equally important, it seems idioms are difficult to learn and comprehend. The

complexity of this area within language learning is another reason why teachers need to explain, and teach idioms to students.

Having noted the role of idiomatic phrases, teachers are required to facilitate the way learners acquire idiomatic language: collocations (workforce), multiword phrases (in a word), and idioms (cry over spilt milk). Recent research on idiom has focused on both first language and the target language. As for L1 idiom acquisition, the following five models will be discussed to clarify idiom learning: 1) The idiom list hypothesis, 2) the lexical representation hypothesis. 3) The direct access hypothesis, 4) the compositional analysis, and 5) the dual idiom representation model.

Idiom list hypothesis: Proposed by Bobrow and Bell (1973), this model posits that idioms are presented in a mental idiom list equate with other lexicon lists in a person's mind. When a native speaker encounters an idiom, he would calculate and decode the literal meaning of the idiomatic phrase. However, if his linguistic analysis fails, he would refer to a mental idiom list. If a native speaker is after literal meaning, it takes more time, findings later demonstrated that native speakers find the figurative meaning long before they think of the literal meaning (Glucksberg, 1993).

The lexical representation hypothesis: This model was proposed by Swinney and Cutler (1979). Idioms are considered to be long words that are stored in the mental lexicon along with all other words. Then it comes as no surprise that when a native speaker is encountered with an idiom literal and figurative meanings are processed simultaneously. Context is the entity that decides the more fitting interpretation (Cooper, 1999). It is not surprising that why familiar idioms are understood easily; there is no semantic, syntactic, and lexical complexities to process.

Gibbs (1994) extended the lexical representation hypothesis to a third model, the direct access hypothesis; native speakers can be directed to figurative meaning of idioms without knowing the literal one, in case it seems familiar. The fourth model belongs to the second type of idioms which is compositional analysis proposed by Gibbs, Nayak, and Cutting (1989). In a series of studies they found that subjects took more time to process decomposable idioms than non-decomposable ones. Composable ones are defined as idioms that their literal and figurative meanings are close to each other (e.g., pop the question); however, non-decomposable refer to idioms that their literal meanings give us no clue to arrive at the figurative meaning (kick the bucket). In this sense, learners assign a meaning to individual parts within idioms and comprehend it quickly. This can be interpreted in a way that syntactic analysis is based upon grammatical structure of the words and phrases. This received much criticism later since decomposable idioms cannot be interpreted under this term and basically unitary expressions cannot be decomposed to retrieve its meaning from constituent parts (Glucksberg, 1993).

The most recent theory in idiom classification is the Dual Idiom Representation Model which has more to do with processing. The model was first proposed by Titone and Connine (1994, 1999) which was later enhanced by Abel (2003). It encompasses all former theories in a sense that in processing an idiom, linguistic and direct memory retrieval are both engaged. Accordingly, when an individual encounters an idiom both these systems seek for the idiom entry and one wins depending on the decomposability and familiarity with the idiom. This can be considered as a comprehensive study over idioms. However, in SLA most studies have focused on vocabulary acquisition, not idioms, and many researchers try to generalize them to idioms as well. This is, however, noteworthy that due to the inherent difference between vocabularies and idioms, one cannot generalize the research findings to the field of idiomaticity.

Motivation and Interest

The role of emotion and interest has long been researched. Price (1998) argued that the concept of emotion has been defined inconsistently across various studies. Positive emotions are considered pleasant states of emotion that are distinguished from negative emotions (Gadanhó & Hallam, 2001). Multiple studies have been conducted to corroborate the theory that positive emotions have crucial effects on diverse cognitive processes such as communication process, information process, negotiation process, decision-making process, and problem solving process. Dewey (1913) recognized interest in learning as a critical emotion for successful learning since the beginning of the 20th century. Dewey was the first researcher who noted that positive emotion amounts to deeper learning. Other researchers later reiterated the importance of positive emotion in learning (Schraw & Lehman, 2001).

In the present study, the author tends to make difference between individual and situational interest. According to the former one, once a learner is interested in a certain topic, he pays more attention and gains more knowledge, however, in situational interest learners become interested due to concrete objects, conditions, embedded in a learning environment or instructional design with the purpose of promoting interest from a specific situation. The individual interest is hard to meet since it is challenging to accommodate all students' interest in a variety of topics within one milieu of learning. In short, situational interest is assumed to be inextricably linked with interestingness of a certain situation created by material designers. Accordingly, specific features of a given task can contribute to situational interest in learners. A question now arises as to how this contributes to facilitate idiom acquisition in a computer mediated task such as software.

Talheimer (2004) argues instructional designers can augment text-based learning material by adding interesting elements such as stimulating stories, biographical details, clip arts, photographs, sounds, and video. Shrawman and Lehman (2001) suggests to engage learner's attention and promote interest.

Discussion

As discussed earlier, there is a variety of definitions and research over the topic "idioms" in SLA. However, for the purpose of the present paper, a model is proposed to develop a software to reinforce the recall of vivid idioms (Liontas, 2007) with less effort. This study will address the following research questions so the author will be able to propose an all-inclusive model of tool to learn idioms with less effort in context.

- What is the impact of learner's individual difference, motivation and interest on idiom acquisition?
- What is the effect of computer-mediated instruction (software) on idiom intake and recall?
- What is the effect of pedagogical animated agents as a helping tool on idiom acquisition?

Liontas (2002) introduced conceptual semantic Image (CSI) distance. CSI distance denotes "how close or how distant a target language idiom is from its equivalent native language idiom both conceptually (i.e., in terms of the picture it evokes) and semantically (i.e., in terms of the literal meanings of its words)". As for vivid idioms, regardless of the cultural factors, they seem to have little distance with target language idioms. The question now arises as to how to fill this gap. The author believes that the software model which will be introduced will fill gaps including contextual and cultural ones by forming phases in learning and recognition.

Contextualization

A rather recent discussion on idioms is acquiring the idiom in context. Cooper (1999) found that guessing from contextual information is the most frequently used and also the most effective strategy. Liontas (2002) corroborates the importance of context for idiom recognition and learning. More specifically, context plays an important role when it comes to idioms, which evoke a totally different picture compared to the equivalent idioms in the learners' L1. Some studies have focused on the degree of similarity among idioms in two languages. Irujo (1986) conducted a study for idioms in Spanish and English and found that similarity facilitates the learning process.

Human Conceptual System

Metaphor-based idioms can be comprehended by human conceptual system. There exists a conceptual concept in underlying layers of these idioms. For instance, "achieve a great success in something" is derived from an American idiom "hit a home run" that can be comprehended through a metaphorical structure of LIFE IS SPORT. Other researchers (Gibbs, 1990, 1995; Nayak & Gibbs, 1989) focused on the function of conceptual knowledge in comprehension of metaphorical idioms. Findings suggest that an individual's "understanding of idioms is often constrained by their conceptual knowledge of the domains to which idioms refer" (Nayak & Gibbs, 1989, p. 328).

The Role of Culture in Idiom Comprehension

Researchers have a common consensus on idiom comprehension that conceptual knowledge is cultural-specific. In other words, conceptual metaphorical links have been shaped by specific cultures (Boers and Demecheleer, 1997, 2001).

In one study Demecheleer's corpus (1997) reveals that sailing is rather a specific cultural concept in France. The reason is because it is a source of food and cooking for them. Similarly, Liu (2002) conducted an extensive comparison between dominant American and Chinese metaphorical idioms and his finding confirmed that the knowledge of some of conceptual and metaphorical links is culture-specific. For example, Americans use sports and business metaphorical idioms, however, Chinese employ eating and family metaphors in expressing the same meaning. Cooper (1999) explored that L2 participants in his study tended to employ "a heuristic approach in solving the linguistic problem of finding the meaning of the idioms" (p. 256), through a trial and error effort to seek for figurative meaning of L2 idioms, by applying a variety of strategies, including guessing, using pragmatic knowledge and experimentation.

CALL and Idiom Acquisition

Starting with recent studies and the kind of tools (Table1) researchers have to date utilized to collect data indicates less attempt has been made for software development and if there has been endeavors to develop software, it includes pictures (animated or unanimated), example sentences and translation.

In recent years, multiple studies focused on the incorporation of technology in idiom acquisition. Ghaderi and Afshinfar (2014) conducted a study on the impact of animated funny pictures on learning English idioms. They made a comparison between animated and static funny pictures to examine the impact of them on learning English idiom.

Table 1. Tools Utilized in Recent Idiom Acquisition Studies

Tools	Study
Humorous visuals	Gharderi & Afshinfar, 2014
Pictures	Andarab & Rouhi, 2014
Disney movies	Khoshniyat & Dowlatabadi, 2014
Mnemonics, authentic conversations, and idiom displaying techniques	Guduru, 2012
Using apps	Amer, 2014
Etymological elaboration	Noroozi & Salchi, 2013

Positive elements in the use of animations include:

- They help learners to process idioms easily because it provides students with additional information that static visuals lack.
- They help learners build a mental image via stimulating the depicted behavior.
- Finally, the use of multimedia extended the retention of the taught idioms.

Hoffler and Leutner (2007) found that animated visuals help learners to easily learn idioms than static visuals. The findings of this study is consistent with Cinsistent with the findings of Gharderi and Afshinfar (2014).

Apps to Learn Idioms

Levy and Kennedy (2005) found that “students who received text messages featuring definitions of vocabulary in Italian during regular intervals learned more vocabularies and improved their learning compared to those who did not” (P. 290). Many other researchers conducted studies on mobile learning (Thornton & Houser, 2005, Stockwell, 2008, 2013). The mentioned studies found the same results concerning vocabulary development and the use of cellphones.

The use of game-like apps such as “idiomobile” that contained game-like lessons were considered positive in Learning English idioms. These studies used animated pictures, animated visuals, funny pictures, and applications to facilitate idiom learning (each in a different study). Although native speakers employ multiple models to decode the meaning of the idioms, there are multiple intervening factors that are essential in identification and comprehension of idioms such as familiarity, transparency in meaning and semantic, analyzability, and context.

Although these theory-driven studies have provided the field with significant and generalizable findings, they lack a deep pedagogical understanding of idiom identification. To fill in this gap, I propose a computer-assisted idiom acquisition tool for the following reasons and considerations:

First and foremost, the author maintains that two intertwined theories undergird the development of the tool: Constructivism and Cognitive Theory of Learning. Constructivism posits that learners are active constructors of knowledge and bring their own needs, strategies, and styles to learning (Felix, 2005). As such, we as material developers, educators or researchers are no more concerned with our styles in design, development and presentation of the material. As Felix (2005) highlights knowledge and skills are best acquired within realistic contexts and authentic settings, where learners are engaged in experiential learning tasks. Accordingly, the social constructivist perspective is in focus most, only when educators become active agents constructing an instrument to cater the learning needs in their cultural context. This way idioms are more reiterated and reinforced, hopefully, learners would recall idiomatic phrases with less effort. Furthermore,

students integrate new information with their prior knowledge and bring their own framework and perspectives to view subjects from a different angle. They then will be able to construct meaning and solutions through shared understanding. The author deems that this software can and should pave the way for students.

Problems of Existing Software

Today's software is much concerned with colors, spatial (picture and related narration in proximity) and temporal contiguity (simultaneous narration and picture) principles. They only have agents plus machine narration or an animated agent plus the narration. This type of information design does not fully accommodate the needs of language learners when it comes to idiom learning.

Multimedia is a better tool in learning idioms since it provides learners with authentic input, which is lost in most material while exposing them to the target culture. Suffice it to say, it brings interest and motivation into idiom learning. This motivation accounts for student's faster pace of learning by considering different learning styles in the app. My proposal, hence, is a software comprising of three main parts in line with Mayer's (2001) modality principle:

Segmenting: continuous presentation is broken up into smaller chunks to help the learner represent each segment in detail. It includes constituent components of idioms, which are single words. Once the constituent parts of idioms are learned, they will be engaged in pictures, dialogues, and tasks to practice the idiom in context. Frequent exposure to the idiom on a daily basis can enhance the chance of learning it.

Pre-training is the first step toward idiom mastery. It can be an awareness of what they are supposed to learn later. For example, if the idiom is a vivid phrasal idioms (Liontas, 2002), then provide students with the image through an animated agent and personalized narration. In case there is a proverb to present, the related story can be brought into learner's attention through the same animated pedagogical agent. The use of modality principle can harness the potentials of an app to expedite the process of idiom learning. It is a technique, which aids direct attention to the spoken text in order to offload the visual channel. This way learners do not experience cognitive load.

Personalization: using a conversational rather than a formal style seems to be facilitative. If the pedagogical agent interacts with learners, then it is consistent with constructivism where the learner is engaged in learning. Authentic tasks by the agent, sharing knowledge, gap filling, and focus on output can be all realized by a smart animated pedagogical agent.

The proposed software or application can, thus, act in favor of diminishing CSI distance and make acquisition an activity with less effort. Animated pedagogical agents can convey the concept of the idioms to learners through his culture, understanding, and prior knowledge to make the required association. This way students are exposed to the authentic use of idioms in a contextualized, personalized ambience with different learning styles. The first proposed phase of learning can be utilized to lessen the cultural, social, and CSI distance so students can create mental link with their first-encounter idioms of which they had no mental image. Covering cultural, social, CSI distance, bringing stories which can be served as the student's conceptual system in the first phase, learners are engaged in tasks to use idioms accurately, appropriately, and effortlessly.

Conclusions

Finally, it appears that the incorporation of pedagogical animated agents in learning is increasing and teachers can use this new technology to optimize idiom learning. In short, the usage of animated pedagogical agents can diminish CSI and contextualize learning. They then are considered compatible with constructivism theory as learners prior knowledge is respected. Overall, agents seem to be the most interesting form of animation for both children and adults. This is a new strand of research deserving more attention by idiomatologists and researchers. This proposed software must await further research to be completed in future studies.

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Use of an Online Concept Mapping Tool for Self-Regulated Learning: A Case Study of Grade 9 Mathematics Students in a Montessori Setting

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Abstract

In the present study, we examine the use of an online concept mapping tool, the Concept Maps for Learning (CMfL) website, to support self-regulated learning in a Montessori high school mathematics class. An in depth analysis of 6 grade nine students engaged in independent study revealed that, if utilized, the tool could provide useful feedback leading to higher achievement. However, the lack of visual appeal and other factors may have limited engagement with the tool for some students. Recommendations for improvement, and implications regarding the potential for enhancing self-regulated learning are discussed.

Keywords: concept maps, assessment for learning, self-regulated learning, educational technology

Introduction

Alternative methods of teaching mathematics have been introduced to students in both primary and secondary schools, with varying degrees of success. The recently popularized exploration-based inquiry learning in math and science has been having major impacts in the classroom, altering the teaching styles of math educators. While there are many methodologies and tools that can be utilized by educators to implement such constructivist ideas into their mathematics teaching, the overall goal remains to increase student learning. One effective method of increasing student learning is the frequent use of formative assessment (Clark, 2010). Formative assessment, defined, is “the collaborative processes engaged in by educators and students for the purpose of understanding the students’ learning and conceptual organization, identification of strengths, diagnosis of weaknesses, areas for improvement, and as a source of information that teachers can use in instructional planning and students can use in deepening their understandings and improving their achievement,” (Andrade & Cizek, 2010, p. 6-7). The latter part of this definition highlights that an important goal of formative feedback can be to foster students’ self-regulated learning skills.

Although formative assessment has been successfully utilized in mathematics courses for a variety of age groups (e.g., Ingec, 2009; Phelan, Choi, Vendlinski, Baker, & Herman, 2011; Wilson, Lyons, & Quinn, 2013), time constraints can prevent instructors from being able to implement it effectively (Hudesman, Crosby, Flugman, Issac, Everson, & Clay, 2013; Phelan, et al., 2011). This is particularly true for traditional classes that have set time slots for each class. Montessori schools, however, differ in philosophy in that students are offered more freedom with respect to timetables. As well, educational technologies that provide automated feedback are being developed that may help mitigate teacher’s time constraints, and may also aid in self-regulation of learning (Bhagat & Spector, 2017). In the present study, we examine the use of an online concept

mapping tool, the Concept Maps for Learning (CMfL) website (Filiz, Trumpower, Ghani, Atas, & Vanapalli, 2015) to support self-regulated learning in a Montessori high school mathematics class.

The CMfL tool was chosen for its accessibility and ability to provide feedback on-demand. Briefly, the tool asks a student to rate the degree of relationship between concepts chosen from a particular subject area, which it then converts via the Pathfinder scaling algorithm (Schvaneveldt, 1990) into a concept map (Novak & Gowin, 1984). Student concept maps are then compared to a referent concept map in order to identify the student's conceptual understanding and any missing connections or misconceptions. Feedback is made available to the student in

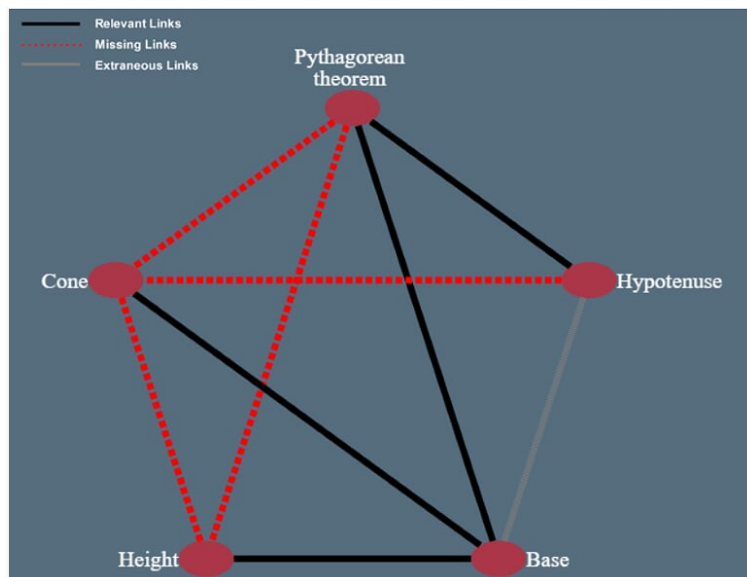


Figure 1. Student concept map generated using the CMfL tool with missing and extraneous links highlighted

the form of their concept map with any missing concept relationships (i.e., links that are present in the referent concept map but missing in the student map) and extraneous relationships (i.e., links in the student concept map but not present in the referent map) highlighted visually (see Figure 1). Finally, the student can access additional feedback and instructional activities by simply “clicking” on the highlighted relationships identified as areas for further study.

As such, the CMfL tool is in-line with Montessori philosophies regarding independent learning and discovery (Colgan, 2016). Although suggestions are provided about concept relationships that the student may not fully understand, it is up to the student to access additional information and to complete activities that allow them to discover how/why the concepts are meaningfully related, rather than being instructed directly by their teacher or an online module. As well, students are allowed to move through the activities at their own pace.

It may also be noted that the CMfL tool appears to be consistent with the various components of self-regulated learning. According to Schraw, Crippen, and Hartley (2006), self-regulated learning is comprised of cognitive, metacognitive, and motivational components. The cognitive component refers to strategies that support knowledge acquisition and use, whereas metacognition refers to a recognition, understanding, and monitoring of one's cognitions and the ability to regulate their cognitive strategies. Motivation refers to personal beliefs and attitudes about learning and one's

self-efficacy. Stevenson, Hartmeyer, and Bentsen (2017) have shown that various concept mapping technologies may support each of these components of self-regulated learning. First, concept mapping itself is an elaborative cognitive strategy. Whether teacher-created (Jacobs-Lawson & Hershey, 2002) or student-centred (Buldu & Buldu, 2010), what makes the use of concept maps effective is that they require the learner to critically consider the organization of the knowledge, the relationships between concepts, and to assimilate this new knowledge into their existing understanding of the subject being studied. Utilization of concept maps as a learning tool discourages rote memorization, or fragmented learning of isolated facts. Second, as visual representations of knowledge organization, concept maps can be used as feedback to clearly highlight one's specific areas of conceptual understanding or lack thereof (Trumpower, Sharara, & Goldsmith, 2010), and students can easily monitor their developing understanding across successive concept mapping activities, thereby facilitating metacognitive awareness. Finally, motivation to learn may be enhanced via the visual, interactive, and accessible nature of concept mapping technologies, and the opportunity to receive instantaneous feedback.

Although concept mapping technologies have demonstrated potential for supporting self-regulated learning, much of the evidence cited above was derived from a relatively small number of studies, and none were implemented in a Montessori setting. Thus, the research question addressed by the present study is, "How does the use of an online concept mapping tool for formative feedback support self-regulated learning in a grade 9 mathematics class that has an emphasis on independent study?"

Methods

Participants

Participants in this study were students in a grade 9 class at a Montessori high school in Ontario, Canada. The class consists of seven students that are progressing through the Ontario grade 9 academic level mathematics course at an independent pace, with common milestone goals. A milestone is roughly defined as an assessment of some kind, whether formative or summative. How students spend time within the unit, prior to the test, studying and learning is primarily up to themselves. The teacher acts more as a guide or coordinator, stepping in to provide lessons or specific feedback based on student-driven requirements. Of the total seven students in the class, six participated in the study. Of these six students, three completed all of the seven concept mapping exercises that were available to them. One student completed six of the seven available concept mapping exercises. The other two students complete two to three exercises. Five of these students were male, and one was female.

One active mathematics and science teacher, one former mathematics and science teacher, and the second author of this paper made up the participants whose ratings were used to create referent concept maps. These participants had all achieved a minimum of a Bachelor's of Education degree and had some experience teaching the grade 9 academic mathematics course in Ontario. One of these participants was the current teacher of the grade 9 class involved in the study. In addition to his participation in creating the referent concept maps, his role included developing feedback and exercises associated with the concept relationships present in the referent maps, and to interact with the students that were participating in the study. Interaction with the students included reviewing their concept maps at his discretion to see if any information could be gleaned that would inform his teaching strategies, and administering and collecting student questionnaires.

Data Collection Instruments

CMfL Tool

Concept maps were created within the CMfL tool. First, lists of key concepts were selected from the following four mathematics units: Analyze Linear Relations, Geometric Relationships, Measurement Relationships, and Optimization. These unit titles and associated concepts were selected from the textbook being utilized for the course, *Principles of Mathematics 9* from Nelson. Since the teacher's course was guided by the textbook, and it was the primary reference tool for the students, the language utilized on the CMfL website for the concepts and feedback was kept consistent with the textbook. To ensure that this was the case, all the material that went online was reviewed by the teacher-participant. Two concept sets were determined for the Geometric Relationships, Measurement Relationships, and Optimization units. Only one was determined for the Analyze Linear Relations unit.

Once the lists of concepts for each unit were determined (heretofore referred to as a "concept set"), the degree of relatedness of each pairwise combination of concepts in a concept set was rated by each of the three subject matter experts on a scale of 1 (completely unrelated) to 5 (highly related). None of the subject matter experts were aware of any of the other's ratings. Ratings for any concept pair that were more than two "rating levels" apart were eliminated to reduce noise. For example, if one expert rated a pair of concepts a 5, the second rated that pair a 4, and the last expert rated them a 1, the ratings of the last expert were eliminated. Once this exercise was completed, the mean of the remaining expert ratings for each pair of concepts was calculated to produce one averaged set of ratings. This averaged set of ratings was then submitted to the CMfL website, which uses the Pathfinder scaling algorithm to transform the ratings into a network representation of concept relationships. The resulting Pathfinder network is a form of concept map that depicts the concept set with links between those pairs of concepts that were perceived to be relatively more strongly related by the experts. This same procedure was used to create referent concept maps for all 7 of the concept sets.

The CMfL tool, and embedded ratings task and Pathfinder scaling technique, was utilized to derive concept maps for each individual student participant in the study, as well.

Teacher-Made Assessments

Mathematics achievement of each student was assessed at 3 different times during the study using a teacher-made quiz, test, and final exam. These assessments were a regular part of the course, comprised of constructed response items, and scored as percent correct out of 100.

Student Questionnaire

Student perceptions and usage of the CMfL tool were determined using a brief paper and pencil questionnaire. Utilizing a selected response format, students were asked how often they used the CMfL tool and to identify as many reasons why they used the tool, from a selection of 7 possibilities.

Procedure

After creating referent concept maps for each of the 7 concept sets as described previously, two different types of feedback were developed for every concept relationship (i.e., “link”) present in the referent maps. The first type of feedback was a verbal explanation of the relationship between the pair of concepts, whereas the second type was a math problem that illustrates that relationship. The referent concept maps and associated feedback were then incorporated into the CMfL tool, which was subsequently made accessible to the student participants. Participants were invited to interact with the CMfL tool as much as they wanted during their independent work periods at school, or anytime outside of school hours. The CMfL tool was configured so that the student’s participated in the pairwise ratings exercise twice for each concept set. Upon completion of the pairwise exercise the first time, the CMfL tool automatically compared the concept map generated by the student’s ratings to the referent concept map.

After comparing the student’s concept map to the referent map, the CMfL tool highlights “relevant links,” “missing links,” and “extraneous links.” Relevant links appear between concept pairs that both the student and experts have identified as being relatively strongly related, and appear as a solid black line. Missing links appear as dotted red lines, and occur when the student has not identified a concept relationship, but the experts have. Messaging on the website prompts student to click on the missing links to obtain feedback. For this study, this is defined as the automated, on-demand formative feedback for the students. If the student clicked on a missing link, they would have the ability to read a textual explanation of why the two concepts are related, and be provided with an example problem to attempt that illustrated the relationship.

The CMfL website presents students with an opportunity to move onto the next step in the exercise by providing a link below the concept map that’s been generated. Once the student is satisfied with their interaction(s) with the missing links, relevant links, and extraneous links, the next step is to have the student go through the same pairwise ratings exercise again. Once the student completes this step, a second revised concept map is generated. Once again, relevant, missing, and extraneous links will appear based on discrepancies between the students’ concept map in comparison to the expert concept map. At this point, both the initial and revised concept maps are available to the students, so that they can have a visual representation about how their understanding may have changed. Additionally, the website provides a scored analysis to quantify a student’s potential improvement.

	Your First Concept Mapping	Your Second Concept Mapping
The number of Relevant Links	1	4
The number of Missing Links	3	0
The number of Extraneous Links	4	4
Your Score	0.13	0.5

Figure 2. Example analysis of initial vs. revised concept map

As can be seen in Figure 2, the CMfL tool provides a score based on the number of relevant, missing, or extraneous links found in the students’ maps. The highest attainable score is 1, or 100%, which is achieved by capturing all relevant links, and not having any missing or extraneous links. Towards the end of the study, the teacher made the textual feedback and math problems

(along with the solutions) available to the students as supplemental study materials in preparation for their final exam.

The students were also asked to complete a questionnaire over the course of the study to gauge the students' opinions on the usefulness and value of the CMfL tool. These questionnaires were administered and collected by the teacher-participant at three milestone points over the course of the study period: after a minor summative evaluation (a quiz), after a moderate summative evaluation (a test), and finally after the culminating summative activity for the year (final exam).

Findings

The results of the CMfL usage and achievement data are shown in Figure 3. As can be seen, only three of the six participating students completed all seven exercises (indicated in green in the Figure).

Student	# times used tool	Completed all 7 concept maps? (Y/N)	Average achievement (across 3 assessments)	# of concept maps with improvement following feedback
1	1-2	N	54.00	2
2	1-2	Y	69.67	1*
3	3-4	N	60.67	1
4	5+	Y	61.00	5
5	5+	Y	87.67	5
6	1-2	N	61.00	1

*Although this student only showed improvement, as measured by PFSIM, on one concept map, he did acquire all relevant links on each of the last 5 concept maps.

Figure 3. Summary of CMfL usage and student achievement

Immediately, we can draw the conclusion that there are aspects of the website that do not provide the motivation necessary for some students to positively self-regulate their learning with this tool. That said, of these three students, two of them (students 4 and 5) saw improved results in their concept maps after engaging with the automated formative feedback in five of the seven exercises. Further analysis revealed that both of these students saw diminished results over their first several concept mapping exercises, but then improvement across the remaining exercises. This leads us to the assertion that the student's comfort level with CMfL improved after their first use of it, which in turn allowed for subsequent exercises to be better understood, which led to a number of results that we can categorize as improvements. Student 2 saw initial improvement, then remained stagnant across the other exercises. For this to have occurred, our suspicion is that the student realized the relative nature of the pairwise ratings exercise. Analysis of student 2's generated concept maps reveals that all relevant and extraneous links are present, and that there are no missing links, for exercises 2 through 7. Only on the first concept mapping exercise that this student engaged with did he/she see missing links, before improving after engaging with the formative feedback. Tying these results to student achievement, we can see that the three students who completed all exercises and showed some indications of improvement in their concept maps had higher levels of achievement on the assessments than did the three students who failed to complete the exercises. These findings might, in turn, be linked to frequency of use of CMfL. Generally, the trend appears to be that increased usage of the concept mapping website, as indicated by frequency of usage and/or completion, may be associated with higher student achievement.

The student questionnaire results also revealed reasons why students did, or did not, use CMfL. All six students in the study indicated that they engaged with the website because they were "told

to” as participants in the study. However, three responded that CMfL helped as an introduction to the concepts and that, in general, it helped them learn the concepts being taught. These three respondents showed increased or steady achievement between the first two intervals at which cumulative student achievement was calculated. Of these students, the one who saw the biggest drop between his/her term mark before and after the final exam also identified as having only engaged with CMfL 1-2 times over the course of the study. Again, in general, the results reveal that students that engaged with CMfL more frequently, or at least completed all the exercises, saw better achievement. The most frequent response with respect to why students did not use CMfL was a lack of visual appeal. Four of the students cited this as a detriment to their use of the website. In the final questionnaire, students were given an open field to suggest improvements for the website, and five of the six students provided comments that were some derivation of, “Make it more visually appealing.” Two students noted that the interface would be improved if it could be represented as an application on a mobile device.

Conclusions

These results support our assertion that CMfL can provide an effective tool for self-regulation of learning for some students, with potential to engage more students with further refinement. Although somewhat promising, student comments provided insight into how it could be improved.

Limitations

There are some key limitations to the study as designed. First and foremost, the small sample size, coupled with the lack of completion of the exercise, means that the study has low power. Thus, generalization beyond the particular case studied here should only be made with extreme caution. However, it might be noted that this paper considers only a portion of the analysis conducted. Results of the interviews that were conducted with the teacher-participant may provide further support to the findings presented to this point.

The CMfL tool itself has proven to be limiting within the context of this study, as well. Although concept maps can be automatically generated using CMfL, issues of usability and lack of visual appeal have been proven to be a deterrent to student adoption, based on the results of the survey. These issues appear to have contributed to some students not completing the full suite of exercises. This lack of student motivation may be at least somewhat overcome through improvements in visual design and user interface.

More fulsome results might have been achieved were it not for time constraints. The study occurred over a six week window towards the end of the academic term for the sample population. This meant that there were many competing interests for student time, including pressures and deadlines for other academic courses, as well as the conclusion of various extracurricular activities. If the study had occurred over the entire academic term, it is possible that more of the students would have completed the full CMfL exercise. If given more time with the tool, it is also possible that the sample population would have interacted more frequently with it.

Finally, the sample in this study may not have been ideally suited for self-regulated learning using CMfL. Although the Montessori learning philosophy relies on student independence, this also means that the tools used need to be sufficiently appealing to the sample population to warrant their attention. The students had the flexibility to learn and study as they desired, and the functional yet rudimentary interface of CMfL clearly deterred students from using the website. If the

limitations of CMfL remain as they are, future studies may consider attempting the same methodology used here with older students. It is possible that students with more intrinsic motivation, such as those that are attempting to achieve at a certain level to qualify for a post-secondary institution, may be able to overlook the aesthetic issues of the website.

Implications

Since teaching philosophies in mathematics are moving away from rote memorization and towards more conceptual, exploratory methods of instruction, the CMfL concept mapping website can be a valuable tool for teachers and students in conveying and understanding mathematics relationships, respectively. And because creation and utilization of concept maps forces both students and teachers to consider the nature of the relationship between sets of concepts, the concept mapping website could act as an effective intersection between conceptual knowledge and applied knowledge in the classroom, which can prepare students to think critically about the mathematics concepts they are learning. This type of critical consideration of concept relationships can result in deeper understanding of the subject at hand.

The environment that this study took place in provided the unique advantage of having students manage their own time and to self-regulate their learning when possible. This study provides a basis for the assertion that a concept mapping website that provides on-demand formative feedback can be an integral tool in an environment where self-regulation is a core pillar of the educational philosophy. This finding may be extrapolated out into later high school, post-secondary, and even real-life working scenarios. The ability to self-regulate is imperative to future success in any context, be it academic or otherwise. Successful findings in this study suggest that concept mapping can sit alongside reading, note-taking, educational videos, and other commonly applied independent learning methods to ensure long-term knowledge transfer occurs. However, ongoing revision of CMfL may be needed to ensure that it is engaging and user-friendly across a wider range of students to maximally support self-regulated learning for all.

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***Part 5: English as a Second Language
(ESL)***

A New Era of Hong Kong's Trilingual Education

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Abstract

After China reestablished the sovereignty of Hong Kong in 1997, China's official language, Putonghua (Mandarin) started penetrating into Hong Kong's political, cultural, social, and educational systems. Even now in 2018, Putonghua reveals tensions and contradictions of the politics of trilingualism in its implementation into Hong Kong's K-12 educational system. Much research has been done to address whether Chinese or English should be used as a medium of instruction in Hong Kong's educational system. However, there is still a huge gap in the research of adopting bi-literacy and trilingualism. This paper, with particular emphasis on Hong Kong's multilingual environment and historical events, examines the importance and benefits of a trilingual education model. To maintain Hong Kong's economic vitality and balance its language policy in its post-colonial years, policy makers and indigenous elites of Hong Kong are suggested to embrace Putonghua as a major communicative language under the framework, "One Country, Two Systems" from China's central government and implement a model of trilingual education with a focus on translanguaging practices.

Keywords: Hong Kong, trilingual education, translanguaging practices, self-identity

Introduction

In 2014, the pro-democracy movement in Hong Kong was under the spotlight of the whole world, making people think back to the Tian'anmen Square Event twenty-eight years ago in 1989, and ponder about how this conflict between socialist mainland China and capitalist Hong Kong can be resolved in a way that will satisfy both parties. Hong Kong was ceded to the United Kingdom under the *Treaty of Nanking* from the Qing Dynasty government of China in 1842 (Susanna & Derek, 1999). After 155 years, in 1997, Hong Kong was handed over to the government of the People's Republic of China under a constitutional principle, "One Country, Two Systems," which was formulated by China's then president, Deng Xiaoping, allowing Hong Kong to be a Special Administrative Region within China with its own political, legal, economic, and financial systems (China.org.cn, 2008).

However, this "One Country, Two Systems" principle has been interpreted differently between by Beijing and pro-democracy activists in Hong Kong, with the fact that both parties disagree on whether there will be a democratic election for Hong Kong's leader in 2017 or a filtered election among pre-proved candidates from the central government. Besides the political conflict in Hong Kong, it is worthy analyzing Hong Kong's multilingualism under "the One-Nation-One-Language Ideology" from Beijing. Furthermore, as a language researcher, it is significant to provide insights into the challenges and opportunities for students living in this multilingual environment of Hong Kong and explicate the importance of translanguaging practices in Hong Kong's K-12 educational system in this new era. What's more, as Hong Kong is approaching the second decade of its postcolonial era, many socio-economic changes have been reshaping students' perceptions of their cultural identity, and their attitudes toward trilingual education. As Tse (2004) stated, "Hong

Kong's real transition it not merely about sovereignty, but also about identity" (p. 54). He further explained that Chinese identity tended to hide its internal heterogeneity and overrides the diversity and complexity of regional and ethnic variations, and inadequate attention was paid to racial diversity and equality in Hong Kong (p. 55). Hence, it is important to investigate how all three languages, Putonghua, Cantonese, and English, in Hong Kong's educational system are fostering multilingualism and multiple identities.

Generally speaking, Cantonese (a dialect originated from Guangdong province and widely spoken in the southern provinces of China) and Putonghua (formerly known as Mandarin and largely spoken by people of the northern provinces) "are varied in syntax, lexis and phonology" (Pierson, 1992, p. 186). But what has been challenging to the Hong Kong government is that even though Hong Kong has an official policy of trilingualism (Putonghua, Cantonese, and English) and bi-literacy (Chinese and English), the majority of schools in Hong Kong are still keeping English and Cantonese as the two main languages for instruction, which, as a result, makes the status of Putonghua quite ambivalent. On the contrary, Putonghua instruction is increasingly favored by socio-economically advantaged Hong Kong elites who aim to foster trilingual children who can transcend linguistic and cultural boundaries. By being able to speak all three languages, those elite trilinguals will become more active in socio-economic and political fields. Obviously, despite the return to "motherland," a linguistic segregation still exists and the schools in Hong Kong fail to cater for linguistic and cultural diversity.

This article will argue that the failure to alleviate the political tension between Beijing and pro-democracy activists in Hong Kong may well be founded in the inability of Hong Kong government to intervene in local schools' language policy, and in the lack of nationalistic education and national identity among Hong Kong's younger generations regarding Chinese great cultures and civilizations. Hence, this article, throughout, will introduce translanguaging practices to Hong Kong's K-12 educational system. It is hoped that translanguaging practices will enhance a two-way understanding of social, cultural, and economic values of cultural heritage that will help appease people from both sides when it comes to political matters, and consequently promote political stability and lead people to a well-balanced equilibrium between different identities and languages.

Literature Review

Policy of Trilingualism

To begin with, unlike the domination of a centripetal power of the unitary language, Mandarin, in mainland China, there is a long history of language diversity and multilingualism in Hong Kong (Jerudd, 2002). Hong Kong has been using both Cantonese and English as official languages for over one hundred years. During the British colonial era, immigrants from mainland China, India, Southeast Asian countries, and United Kingdom contributed a lot to the diversity of the languages in Hong Kong. Even after the reunification, Hong Kong's major mediums of communication is still English and Cantonese dominated. Despite powerful ideologies of homogeneity from mainland China, Hong Kong continues to be heterogeneous in many practices like business, social media, tourism, politics and so on (Blackledge & Creese, 2010, p. 28). The Central Education Ministry in China, as the policy-makers for the national curriculum and education development, has always attempted to embed Putonghua education and "patriotism concepts" (with a communist perspective) into the curriculum of Hong Kong Ministry of Education; however, ironically, a series of protests as a rejection answer from Hong Kong implied that the political influence from

mainland China made this “unitary language” policy a mirage, despite the fact that the Ministry of Education in Hong Kong asked most schools to adopt Chinese as the medium of instruction in 1997, meaning that all local schools in Hong Kong would offer Putonghua for the first nine years of school, with all the textbooks requiring approval and all Putonghua classes subject to inspection by the Education Ministry (Hinkel, 2011, p. 131). Interestingly, Mathews, Ma, and Lui (2008) describe Hong Kong people’s love for China as “Sunshine Patriotism,” which refers to a conditional identification with the country only in good times, as when, for instance, China wins medals in the Olympics. Many Hong Kong people express that they tend to have admiration for the great achievements of their ancient Chinese ancestors, yet they keep a distance from being Chinese when it involves the Communist party from central China’s government and the uneducated Chinese from mainland China (see a short interview below):

A/270/C - I am a Chinese. ‘Chinese’ refers to all Chinese people with yellow skin and it doesn’t carry any negative meanings. But I am NOT a mainlander.... ‘Mainlanders’ means those people who live on the mainland, especially those who speak loudly and behave rudely. (Lai, 2011, p. 255)

Therefore, in the multilingual environment of Hong Kong, it is easy to understand that “The One-Nation-One-Language Ideology” can be hardly achieved even with the intervention of a strong political power (Blackledge & Creese, 2010). From my perspective, this anti-unitary language voice from the Hong Kong people is related to the history and identity. Due to its British colonial history and Hong Kong’s coastal location connecting with mainland China, English plays an important role in formal communication of all kinds, in government, the legal domain, in university textbooks and teaching materials, and as a professional language of business and technical communications in the territory (Bolton, 2000). Given the fact that Cantonese is their mother tongue, English-speaking prominence in Hong Kong allows the people to better embrace economic prosperity, international trade, and salient values like democracy and liberty from western world. These factors are gradually and subconsciously impacting the Hong Kong people’s identity, defined as being dynamic, multifaceted, and negotiated through language (Shin, 2013, p. 99). This coincides with Hinkel’s (2011) language management theory which states that language planning involves multidimensional discipline, encompassing as it does linguistic, sociolinguistic, economic and political aspects of the integration of language in society (p. 896). That said, it seems that a trilingual education model should be considered and implemented, and any thought of creating an unitary-language society in Hong Kong may hinder social mobility, which was demonstrated by a series of protests in the past decade.

To this end, inviting Putonghua as a major communicative language to the K-12 educational system in Hong Kong will contribute to a harmonious convergence of the local and the national identity based on the shared historical events, traditional values, and cultural beliefs. More importantly, embedding trilingual education into the schools in Hong Kong will empower the younger generation in Hong Kong to hold a humanitarian view to understand the mainstream ideology in mainland China, to foster national identity and integration with China, and to share their unique perspective of human rights, capitalism, and liberal democratic principle of equality of opportunity with their peers in mainland China, which will substantially narrow the socio-economic gap between the two sides. As Davison and Lai state, “Hong Kong’s control of its unique sphere of language policy sovereignty is both constrained and enlivened by its connection with the sphere of influence and attraction that both the Anglophone world and the proximal ‘motherland’ exert” (p. 132).

Language Use in Hong Kong

In a study conducted by Wang and Kirkpatrick (2015), although the “biliterate” and “trilingual” language policy had been implemented in Hong Kong primary schools, trilingual education models varied, particularly in terms of the implementation and effectiveness, which resulted from a lack of qualified teachers as well as students’ low level of English standards. In the 155 surveyed schools, Wang and Kirkpatrick found out that, firstly, majority of students are constituted by local Hongkongers with an average of 83.57% and students from mainland are only counted with an average of 12.58% (see Figure 1). Secondly, among the three types of local schools (government schools, aided schools, and private schools) in Hong Kong, code-switching and supplemented languages between Putonghua, Cantonese, and English prevail in almost everyone school (see Figure 2). Wang and Kirkpatrick’ study inform researchers that trilingual education in Hong Kong is still in its early stage, considered immature because of the conflicts between schools’ language policies and teachers’ real practices in the classroom. Meanwhile, the heterogeneous population in the classroom requires Hong Kong policy makers and teachers to work out a sustainable plan that allows students of different ethnic backgrounds to flourish in the trilingual education models.

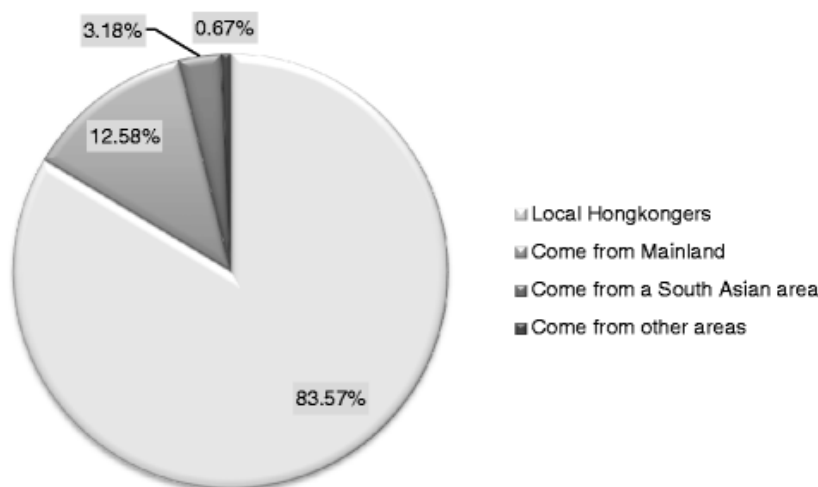


Figure 1. Average percentage of the origins of students (Wang & Kirkpatrick, 2015)

Statistics on language use		
	1996	2016
English	38.1%	53.2%
Cantonese	95.2%	94.6%
Mandarin	25.3%	48.6%

Figure 2. Statistics on language use in Hong Kong (Liu, 2017)

Table 1. The Use of Different Medium of Instruction(s) in Different Subjects across Schools (Wang & Kirkpatrick, 2015)

Subject	Language(s) used as MoI(s)	All (155)	Aided (145)	Gov't (4)	DSS (6)
Chinese	Cantonese (almost 100%)	89(57.42%)	83(57.24%)	3(75%)	3(50%)
	Putonghua (almost 100%)	65(41.94%)	63(43.45%)	0	2(33.33%)
	In junior grades, Cantonese is used as MoI; in senior grades, Putonghua is used	10 (6.45%)	8 (5.52%)	0	2(33.33%)
	In the same grade, some classes use Cantonese as MoI, others use Putonghua	54(34.84%)	53(36.55%)	1(25%)	0
English	Teachers may switch between the two languages in class	23(14.84%)	22(15.17%)	0	1(16.67%)
	English (almost 100%)	99(63.87%)	93(64.14%)	0	6(100%)
	Other than English, teachers may use Cantonese subject to teaching and learning needs	53(34.19%)	50(34.48%)	3 (75%)	0
	In junior grades, both English and Cantonese can be used as MoIs; in senior grades, only English can be used as MoI	12(7.74%)	11(7.59%)	1(25%)	0
Putonghua	Putonghua (almost 100%)	136(87.74%)	128 (8.28%)	3(75%)	5(83.33%)
	Putonghua mainly, supplemented by Cantonese	12(7.74%)	11(7.59%)	1(25%)	0
	In junior grades, both Putonghua and Cantonese can be used as MoIs; in senior grades, only Putonghua can be used as MoI	7(4.52%)	7(4.83%)	0	0
Mathematics	Cantonese (almost 100%)	145(93.55%)	137 94.48%)	4(100%)	4(66.67%)
	Putonghua (almost 100%)	1(0.65%)	1(0.69%)	0	0
	English (almost 100%)	7(4.52%)	4(2.76%)	0	3(50%)
	Cantonese mainly, supplemented by English	6(3.87%)	6(4.14%)	0	0
General Studies	English mainly, supplemented by Cantonese	2(1.29%)	2(1.38%)	0	0
	Cantonese (almost 100%)	145(93.55%)	136(93.79%)	4(100%)	5(83.33%)
	Putonghua (almost 100%)	1(0.65%)	1(0.69%)	0	0
	English (almost 100%)	8(5.16%)	4(2.76%)	0	4(66.67%)
Visual Arts	Cantonese mainly, supplemented by English	6(3.87%)	6 (4.14%)	0	0
	English mainly, supplemented by Cantonese	2(1.29%)	2(1.38%)	0	0
	Cantonese (almost 100%)	147 94.84%)	139(95.86%)	4(100%)	4(94.84%)
	English (almost 100%)	4(2.58%)	3(2.07%)	0	1(16.67%)
Music	Cantonese mainly, supplemented by English	2(1.29%)	2(1.38%)	0	0
	Putonghua mainly, supplemented by Cantonese	1(0.65%)	1(0.69%)	0	0
	English mainly, supplemented by Cantonese	3(1.94%)	2(1.38%)	0	1(16.67%)
	Cantonese (almost 100%)	143(92.26%)	135(93.1%)	4(100%)	4(66.67%)
Physical Education	English (almost 100%)	6(3.87%)	3(2.07%)	0	3(50%)
	Cantonese mainly, supplemented by Putonghua	1(0.65%)	1(0.69%)	0	0
	Cantonese mainly, supplemented by English	5(3.23%)	5(3.45%)	0	0
	Putonghua mainly, supplemented by Cantonese	2(1.29%)	2(1.38%)	0	0
IT/ Computer	English mainly, supplemented by Cantonese	2(1.29%)	2(1.38%)	0	0
	Cantonese (almost 100%)	149(96.13%)	140(96.55%)	4(100%)	5(83.33%)
	English (almost 100%)	4(2.58%)	3(2.07%)	0	1(16.67%)
	Cantonese mainly, supplemented by Putonghua	1(0.65%)	1(0.69%)	0	0
IT/ Computer	Cantonese mainly, supplemented by English	2(1.29%)	2(1.38%)	0	0
	English mainly, supplemented by Cantonese	1(0.65%)	1(0.69%)	0	0
	Cantonese (almost 100%)	141(90.97%)	134(92.41%)	3(75%)	4(66.67%)
	English (almost 100%)	5(3.23%)	3(2.07%)	0	2(33.33%)
IT/ Computer	Cantonese mainly, supplemented by English	8(5.16%)	7(4.83%)	1(25%)	0
	Putonghua mainly, supplemented by Cantonese	1(0.65%)	1(0.69%)	0	0
	English mainly, supplemented by Cantonese	3(1.94%)	3(2.07%)	0	0

A study (2017) by Liu compared the popularity (see Figure 3) of Mandarin between 1997 and 2017 and revealed that the overall standard of Putonghua was rising, especially among young people. Also, Liu noticed that the Hong Kong government, officially, encouraged students to become bi-literate in Chinese and English, and more specifically, trilingual in English, Cantonese, and Mandarin.

Bacon-Shone, Bolton, and Luke (2015) surveyed over 200k households with over 600k respondents who were aged five or above to report their languages/dialects across the 18 districts and across the 412 constituency areas in Hong Kong (p. 37). From the survey results (see Table 1), they found out that language diversity in Hong Kong was higher than commonly assumed with a wide range of, aside from Cantonese that was spoken at least 85% among all the districts, “other languages from Asia and across the globe, including Hindi, Thai, Urdu, Korean, Japanese, French, Spanish, German, and Italian” (p. 37). The authors also noted that some constituency areas only

had half of residents speaking Cantonese, while some areas having English speakers as high as 93%. These results indicate that Hong Kong is becoming increasingly trilingual or even multilingual, notwithstanding that Cantonese remains the key language for oral communication in many settings.

Table 2. Range of Languages/Dialects across Districts Council Constituency Areas (DCCA)

Language	Overall	Min Districts	Max Districts	Min DCCA	Max DCCA	DCCA with Max
Cantonese	95.839%	84.93%	98.42%	56.34%	99.76%	TaiPo:FuMingSun
Putonghua	47.852%	42.58%	52.93%	30.97%	64.19%	Eastern:Kam Ping
English	46.070%	35.83%	69.50%	21.68%	93.17%	Central & Western:Peak
Hakka	4.731%	1.07%	10.67%	0.32%	27.40%	North:Sha Ta
Chiu Chau	3.768%	1.86%	6.74%	0.50%	11.64%	Kowloon City:Lung Shing
Fukien	3.497%	1.15%	8.97%	0.00%	30.81%	Eastern:Kam Ping
Indonesian	2.430%	1.83%	4.00%	0.29%	7.80%	Wan Chai:Causeway Bay
Filipino	1.655%	0.48%	6.63%	0.00%	18.40%	Central & Western:Peak
Sze Yap	1.537%	0.68%	4.32%	0.00%	8.66%	Sham Shui Po:Nam Cheong C
Japanese	1.527%	1.08%	2.98%	0.09%	8.15%	Yau Tsim Mong:Tsim Sha Tsui W
Shanghainese	1.130%	0.64%	2.43%	0.00%	6.53%	Tsuen Wan:Fuk Loi
French	0.596%	0.20%	2.93%	0.00%	11.42%	Islands:Discovery Bay
Hindi	0.488%	0.10%	2.12%	0.00%	13.22%	Yau Tsim Mong:Tsim Sha Tsui E
Thai	0.329%	0.18%	0.87%	0.00%	3.68%	Kowloon City:Lung Shing
Urdu	0.244%	0.03%	0.81%	0.00%	3.80%	Yau Tsim Mong:Jordan W
Spanish	0.237%	0.08%	1.32%	0.00%	3.10%	Central & Western:Mid Levels E
Nepali	0.236%	0.00%	2.25%	0.00%	9.85%	Yau Tsim Mong:Yau Ma Tei
German	0.227%	0.06%	0.93%	0.00%	5.27%	Islands:Discovery Bay
Korean	0.211%	0.09%	0.57%	0.00%	2.04%	Islands:Tung Chung N
Vietnamese	0.093%	0.04%	0.20%	0.00%	1.52%	Tuen Mun:San Hui
Malay	0.093%	0.05%	0.28%	0.00%	1.23%	North:Yu Tai
Italian	0.073%	0.02%	0.51%	0.00%	1.77%	Central & Western:Mid Levels E
Dutch	0.044%	0.01%	0.15%	0.00%	1.01%	Sai Kung:Pak Sha Wan
Portuguese	0.027%	0.00%	0.12%	0.00%	0.71%	Southern:Bays Area
Russian	0.026%	0.00%	0.10%	0.00%	0.46%	Southern:Pokfulam
Bengali	0.026%	0.01%	0.10%	0.00%	0.94%	Yau Tsim Mong:Jordan E
Sinhalese	0.016%	0.00%	0.06%	0.00%	0.53%	Sai Kung:Hang Hau W

As for the younger generation in Hong Kong, trilingualism has been embraced widely and performed well linguistically due to the communicative demands from the education, workforce, and social media, regardless of the various attitudes toward it. Figure 4 (Bacon-Shone, Bolton, & Luke, 2015) shows clearly that the educated people in Hong Kong, mostly, will be able to speak Cantonese, Putonghua, and English, which also reveals that being trilingual will be a “standard package” amid Hong Kong’s future generations.

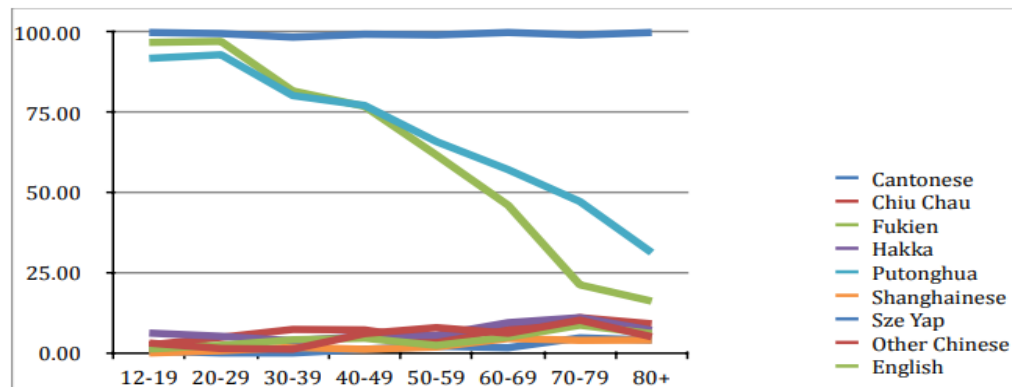


Figure 4. Ability to speak major languages/dialects by age group (p. 33)

Challenges and Opportunities of Trilingualism

Having a meaningful and comprehensible multilingual environment as a world class city, Hong Kong will better prepare students to embrace a globalized world with both challenges and opportunities. From the educational perspective, Hornberger (2005) argues that learning is maximized when multilingual students are allowed and enabled to draw from across all their existing language skills, rather than being constrained by monolingual instructional assumptions and practices (p. 605). This assertion correlates with the interplay between Cantonese, English and Putonghua for the mainland immigrants in Hong Kong. It also resonates with the Chief Executive's belief that trilingualism together with goals such as the development of critical thinking, problem-solving, creativity and information technology skills is a critical component of the preparation of human capital to face the economic challenges of globalization (Kan & Adamson, 2010). In addition, a research study encourages to foster a high degree of bilingual proficiency as it will help students to accrue cognitive, social, personal, and economic benefits (Blackledge & Creese, 2010, p. 43). Pratt (2004) holds a similar stance arguing that "monolingualism needs to give way to bilingualism or even trilingualism" in a multilingual environment like Hong Kong or the U.S. through the lens of globalized military operations. Globally speaking, a trilingual model will secure the close links between western and oriental cultures which can be a great asset because Hong Kong wishes to maintain its vitalized position as Asia's world city for development in the twenty-first century (Lai & Byram, 2003, p. 317).

Surprisingly, based on Feng's (2013) data revealing that "around half of mainland undergraduates find jobs in Hong Kong after graduation, along with about 30 per cent of mainland postgraduates," it is easy to see that students from mainland China who have obtained a degree from the universities in Hong Kong might have quite an advantage in the job market as they can understand Cantonese after several years' input and achieve a bicultural awareness and a universal perspective to connect mainland China, Hong Kong and western countries together (Shin, 2013, p. 25). Chen (2012) reported that "Mandarin has eclipsed English as the language second most commonly spoken by residents of the special administrative region" and he believed that language played a role in the "ramping up of mainland-Hong Kong tensions".

Analogously, a girl called Xiaotong in Gu's (2014) study identified the advantage of being multilingual in her house management job because her ability to speak different languages and her confidence in communicating with other people with different languages have enabled her to have more working opportunities in different places or countries. This ties in with Kamwangamalu's

(1997) “formula of 3 ± 1 language outcome,” emphasizing that in a post-colonial setting, market forces would force multilingual countries to formulate policies geared toward this formula so there can be a wide set of mobility opportunities within their countries. In other words, a good solution to maintain this dynamic workforce in Hong Kong is to embrace the positive interventions from the policy-makers and integrate the policies with the interests of people from different groups.

However, there are still many challenges for minorities who are immigrants from either China or Southeast Asia. Differences between the linguistic and cultural background of those immigrants with different perspectives may make it difficult for them (especially for students) to fit in or be accepted by the multilingual environment of Hong Kong. Even given that Hong Kong is a Special Administrative Region of the People’s Republic of China, local Hong Kong citizens have a deep resentment toward mainland China and mainland Chinese identity, considering mainlanders as “locusts” for eating away job opportunities and social welfare as well as demonstrating “uncivilized behaviors” like jumping queues, yelling, smoking, squatting, and even defecating in public places (Chee, 2012). This means that although Hong Kong people take pride in Chinese history and hold positive attitudes about the three languages, they nevertheless hold negative stereotypes toward dark side (backwardness, lawlessness, and low education) about people from mainland China. Thus, as educators in Hong Kong, it is very essential to understand the concerns and expectations of the students from both immigrant families and local Hong Kong people, and lead them to develop a positive perspective upon bilingualism or multilingualism, which will lessen the tensions of cross-border relationship and improve the cohesion of the whole country. More importantly, offering consistent and cumulative academic support in the native or heritage language will help those students perform significantly better on academic tasks (Blackledge & Creese, 2010, p. 43).

Translanguaging Practices at Present Time

Finally, based on the multilingual environment of Hong Kong, a translanguaging pedagogy should be advocated in the educational system to cultivate students’ bicultural awareness and biliteracy (Creese & Blackledge, 2010). Interestingly, whenever I had a chance to interact with students from Hong Kong who are currently studying at a university in the U.S., I became aware of their frequent code-switching in our conversation, mixing English words with Chinese or Cantonese grammars. Instead of seeing this type of code-switching as a lazy language habit nor a communicative deficit, language educators should consider code-switching as a valuable linguistic resource and facilitating tool for bilinguals (Shin, 2013, p. 139). This type of translanguaging method in a real conversation can greatly enhance the flow of information exchange rather than limit the expressive capacity of an individual (MacSwan, 1999). Similarly, Blackledge and Creese (2010) also argue that “by which bilingualism is not simply seen as two separate monolingual codes, but depends upon the reconceptualization of understanding about language and bilingualism.” My interpretation is that the essence of bilingual education is to maintain good communication and cultural heritage through using both languages simultaneously other than monoglossic ideologies of bilingualism.

However, to further advance bilingualism or multilingualism in a heterogeneous Hong Kong classroom(s) where Mandarin, Cantonese, and English are all dialogically functional, a translanguaging pedagogy can serve as an effective tool to promote a deep and full understanding of subject-matters, develop literacy in the weaker language, improve home-school cooperation, and maintain minorities cultural heritage (Blackledge & Creese, 2010, p. 43). Garcia and Wei (2014) believe “translanguaging differs from the notion of code-switching in that it refers not

simply to a shift or a shuttle between two languages, but to the speakers' construction and use of original and complex interrelated discursive practices that cannot be easily assigned to one or another traditional definition of a language, but that makes up the speakers' complete language repertoire" (p. 22). For the newly arrived students in Hong Kong, it will be very hard for them to adapt to a fully Cantonese environment within a short time. Besides linguistic difficulties, these new students will also have to tackle the psychological challenges and sociocultural differences.

Kroskrity (2004) asserts that because beliefs about languages are socially and culturally constructed, language ideologies are not fixed or static, but multiple and diverse across cultures and individuals. Translanguaging, in this situation, can help educators examine the experiences of students from different linguistic and cultural backgrounds, understand the nuanced relationships between their dominant language ideologies, language beliefs, linguistic practices, and projected identities, and focus on the political and ideological load of their beliefs and the power relations between different linguistic resources (Gkaintartzi & Tsokalidou, 2011). Hence, it will be helpful for students to settle down in this new multilingual environment if there are linguistic options available and they are allowed to utilize both verbal tools like code-switching between Putonghua, English, and dialect(s), and non-verbal tools such as signs, semiotics, gestures, and social media to interact with other students. Through translanguaging practices, students will be able to reconstruct their identities and develop biliteracy or tri-literacy in this complex and dynamic multilingual environment. For instance, a student from Beijing who migrates to Hong Kong may find it difficult to express himself or herself with his or her accented Cantonese in the classroom. Nonetheless, translanguaging, aiding the conversation with Hong Kong students, can become part of his or her linguistic repertoire and allow him or her to send verbal and nonverbal messages in this multilingual environment. In Li's (2011) perspective, translanguaging is transformative in nature and creates a space in which a multilingual speaker like this student from Beijing bring together his or her attitudes, beliefs, and ideologies, personal histories, and experiences into one coordinated and meaningful performance (p. 1223).

Gu (2014) conducted a study to explore the voices and experiences of both mainland Chinese and Hong Kong students via translanguaging space and identity construction and it demonstrates a similar scenario to the student from Beijing below who uses a translanguaging strategy to manage fluid communication in a multilingual environment:

Transcript

- Shan (mainland): So ... But I still don't understand the third ...
- Melody (HK): Can we speak in Chinese? 甘咩 (then) what factors? 係乜野决定佢咁嘅 learning effect? (in Cantonese)
- Coral (HK): In exemplar task B, teacher 嘅影响唔多, 事關 teacher 都無 guide 佢地做乜野, teacher 有好多 input. Teacher input 得唔多啦, 我覺得, 佢無控制學生喺整個活動中嘅(行為, 表現) ... (in Cantonese).
- Shan: 但係佢中間都有俾佢地 produce a good self-description (in Cantonese).
- Teacher: Speak quickly!
- Coral: 但係無俾一個好大幫助指引啊 (in Cantonese).
- Shan: 嗯, 嗯. 但係
- Coral: 第一個 task 好明顯, 好重要嘅一個係教 preposition 同 food festival. (in Cantonese)
- Shan: 嗯, 係啊. (in Cantonese) ...

- Shan: 我覺得其實都唔係 teacher-centered 嘅, 去 determine 佢地做 D 乜野. 都係俾佢地一個 frame, 但係呢個應該唔係 teacher-centered 嘅. (in Cantonese)
- Coral: 就係個 (higher tone) Dmaterials, 個 (higher tone) 個 ... (in Putonghua)
- Shan: ok
- Teacher: OK. We need to stop.

Translation

- Shan (mainland): So ... But I still don't understand the third ...
- Melody (HK): Can we speak in Chinese? Then what factors? What determines their learning effect? (in Cantonese)
- Coral (HK): I think in exemplar task B, the influence of the teacher is limited, because the teacher doesn't guide them to do anything. There is not that much teacher input and the teacher doesn't control the students' practices in the whole activity. (in Cantonese)
- Shan: But the teacher does 'produce a good self-description.' (in Cantonese)
- Teacher: Speak quickly!
- Coral: But there is no substantial support or guidance. (in Cantonese)
- Shan: well, but ...
- Coral: Because in the first task, the support from the teacher is obvious and the teacher has taught the students preposition and food festival. (in Cantonese)
- Shan: well, yes. (in Cantonese)
- Shan: I mean what they are doing is not according to the teacher but according to the frame that has been given by the teacher. I don't think this is teacher-centred. (in Cantonese)
- Coral: those materials (in Putonghua)
- Shan: ok
- Teacher: OK. We need to stop. (Gu, 2014, pp. 323-324)

Apparently, a translanguaging strategy was adopted in this dialogue articulated and moved between English, Cantonese, and Putonghua. Participants were found to establish a translanguaging space through hybrid language use, which is considered “a systematic, strategic, affiliative, and sense-making process” (Gutierrez & Alvarez 2001, 128). To put it in another way, the participants in this dialogue were able to utilize their linguistic repertoire in a complex and sophisticated way to perform a dialogue that was culturally and linguistically contextualized. What's more, this dialogue is indicative of their unique Hong Kong identity and cultural backgrounds.

In order to execute this translanguaging strategy successfully, there needs to be professional trainings arranged for Hong Kong teachers in K-12 educational system and policy-makers in the Ministry of Education who are expected to integrate content and syllabi in various domains in regards to the languages in Hong Kong. In other words, teacher competence should be compatible with the educational resources that can provide meaningful contexts for students from policy-makers in Hong Kong. Specifically, the professional trainings for the teachers in Hong Kong can consist of Richards' (1998) six domains: general theories of teaching, teaching skills, communication skills, subject matter knowledge, pedagogical reasoning and decision-making, and contextual knowledge. Especially for a multilingual environment, teachers need to incorporate

positive beliefs and values concerning multilingualism and synthesize the effective L2 teaching strategies for better translanguaging practices.

However, the current situation in Hong Kong's K-12 system is exacerbated by the demanding nature of dual and triple language programming. A lot of schools are not able to find suitably qualified and experienced teachers nor support translanguaging practices with appropriate teaching materials and resources (Davison & Lai, 2006, p. 126). What is worse, Canadian French immersion programs, which resemble transitional bilingual programs that promote the development of the majority language, rather than bilingualism (Davison & Lai, 2006, p. 126), prevent teachers from developing bi/trilingual teaching skills.

For this reason, it is necessary to put a focus on fostering qualified teachers of triple languages at major universities of Hong Kong. Both pre-service teachers doing their undergraduate study and normal teachers serving Hong Kong's K-12 educational system are suggested to take courses with heavy emphasis on trilingual education, literature and culture so they can contribute to the successful translanguaging practices in a bilingual or trilingual program and help students promote bi/tri-cultural awareness in a diglossic environment. Taking the stance of researchers at major Hong Kong universities, there should be several constructive solutions of pedagogical practices to the dual/trilingual programs in Hong Kong's K-12 educational system. Ideally, students are expected to present their academic skills in both Putonghua-medium program and an English-medium program and demonstrate appreciation of both Chinese and Western traditions and values. Correspondingly, a comprehensive curriculum framework concerning dual or trilingual education needs to be well implemented and Hong Kong Ministry of Education is obliged to clearly articulate pertaining standards and benchmarks for all subject areas taught in both Chinese and English and provide coherence and consistency for those dual/trilingual programs throughout the K-12 educational system. In a word, it is likely that translanguaging practices can be embraced and utilized by Hong Kong's K-12 educational system if there is adequate support in the curriculum, research, and actual practice of dual/trilingual programs from both policy makers and language researchers in Hong Kong.

Conclusions

In sum, the pro-democracy movement in Hong Kong leads many researchers to examine the multilingualism in Hong Kong and discuss its implications upon Hong Kong's K-12 educational system. While Hong Kong's society is undergoing political transformation and globalization, Putonghua as a major communicative language will still have a long and complex way to go. However, it is apparent that Putonghua, significantly, has offered a pragmatic account for trilingualism awaiting thoughtful integration with Cantonese and English in the medium of instruction in Hong Kong's K-12 educational system. More importantly, the enactment and realization of incorporating trilingual education is believed to have an enormous impact on Hong Kong students' national identity and integration of Chinese and western traditions. Indeed, the power of the unitary language policy from central government of P. R. China has been reshaping Hong Kong's multilingualism, but factors such as the British colonialism, geographical location of Hong Kong, and being a world class city contribute to the diversity of languages in Hong Kong.

It is worth noting that, living in a multilingual environment like Hong Kong, students are provided with both challenges and opportunities. a successful implementation of trilingual education in Hong Kong's diglossic environment will better prepare students to be competitive in this dynamic world class city. To this end, language educators in Hong Kong are suggested to adopt a

translanguaging strategy, which refers to “multiple discursive practices in which bilinguals engage in order to make sense of their bilingual worlds (Baker 2011; Garcia, 2009; Garcia, 2011, p. 147),” and incorporates “both code-switching and translation, but differs from them in that it is a process in which bilingual students employ their linguistic resources to perform bilingually in various ways of classrooms, such as reading, writing, taking notes, discussing, and signing” (Gu, 2014, p. 313). In a heterogeneous class, the translanguaging strategy can lead students to foster positive concepts of trilingualism and, ultimately, achieve multiliteracy that may benefit students’ self-identity, develop their linguistic-sociocultural capabilities, and advance their future career. It is significant to enshrine that one core aspect of Hong Kong’ uniqueness is expressed by its linguistic and cultural hybridity, which has given rise to Hong Kong’ trilingual education within educators’ reach herein in the post-colonial era.

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The Effects of Amount of Teacher Talk Time on University Preparation Mid-Intermediate Level Students' Accuracy in Speaking in the Target Language – English

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Abstract

The time consumed by teachers in EFL class has always been a matter of subject and it is highly suggested to keep teacher talk as short as possible. The main aim is to keep teacher talk time (TTT) as short as possible so that students can have enough chance to practice the target language more in the classroom and accordingly learn the target language effectively. This study is concerned with the amount of teacher talk. The aim in this study is to decrease TTT to a certain level and increase the quality of TTT and provide students with necessary corrective feedback to increase accuracy in speaking in English. To realize this aim, two sets of three lessons (before and after the implementation of the changes) were recorded using a digital MP3 recorder and analyzed. The first set of three lessons were designed and prepared by the participant teacher and the second set of three lessons were designed and prepared by the participant teacher and the researcher considering the results of the observation data gathered during the first set of three lessons.

Keywords: teacher talk time, students talk time, corrective feedback, accuracy, speaking in English

Introduction

Foreign language learners are often exposed to the target language in the classroom. The language used by teachers for instruction is known as teacher talk (TT) (Richards and Schmidt, 2010). TT is valuable for some certain reasons;

- TT is generally recognized as a valuable source for the comprehensible input for the learner (Cullen, 1998).
- TT can be used to facilitate and optimize learners' contribution (Walsh, 2002).
- Teacher talk is important for teachers to organize their activities (Yanfen&Yuqin, 2010).

In the process of foreign language learning and second language acquisition, TT as an instrument of implementing teaching plan and teaching goals, has an important role for both teaching organization in the classroom and language learning of students (İnceçay, 2010&Xiao-hui, 2010).

Literature Review

The language teachers employ in the classroom serves as one of the sources of providing input of language knowledge and organize activities in the classroom. Because of its role in language classes, a lot of studies have been conducted on teacher talk and its functions in language classes. Teachers, in language classrooms, have to handle two tasks which are offering sufficient amount of comprehensible language input and offering more chances for students to practice the second language (Xiao-yan, 2006). For this reason, the amount of teacher talking time (TTT) has an effect on language learning, has been concerned by many researchers and linguists. One of the studies on teacher talk was

conducted by Davies (2011). The study was conducted on five Japanese elementary school students aged 6 in a private English school in Japan. Davies recorded two different lessons with the same students and came up with some interesting results. During the first lesson of the study, the amount of teacher talk time was approximately 40-60% and the students talked 44% of the total lesson time in their mother tongue (L1) and they did not talk as much in target language (L2) - English. During the first lesson, the teacher explained them the classroom rules, what they should / should not do and instructed them in the students' L1 to stop non-acceptable behavior with the help of a game. In the second lesson, the amount of TTT remained the same and throughout the second lesson he spoke only in English; however surprisingly the amount of students' speaking in English increased and doubled the amount of the time they spent to talk in L1. Clarifying classroom rules and the teacher's expectation for students, using the students' L1 changed the students' perception of the importance of listening to TT thorough the lesson. Teacher talk was just a tool for students to follow the instructions and accordingly, they spoke in English more than their L1 as they knew what they were asked for. Because they already knew what they were expected to do, the students were more confident, motivated and encouraged to take part in classroom activities and use L2 – English. Most of the time students prefer to be informed and encouraged by their teachers (Yanfen & Yuqin, 2010). At this point, teacher talk was necessary for students to perform activities. Here, Davies (2011) resulted that the amount of TTT may not always be a reliable indication of classroom efficiency or effectiveness. TT encourages interactions between teachers and students, for that reason, teachers should consider what type of language would be more efficient and create an environment where students feel more relaxed and more self-confident and become more enthusiastic in interactive activities. Especially, teachers should employ more positive commenting and encouraging languages in the classroom (Yanfen & Yuqin, 2010).

The studies conducted on teacher talk and the amount of teacher talk mostly judge their contributions to the communication held in language classes (Cullen, 1998). Obviously, teachers are one of the sources for EFL(English as a Foreign Language) students, who do not live in an English speaking country, to get the chance to have a model for speaking in English. Bearing this in mind, EFL teachers should create an appropriate environment to encourage discussions and conversations and for students to practice the target language in the classroom. Using the target language actively in a communicational environment in the classroom gives language learners a chance to use it outside of the classroom in the real world. For many years, educators and researchers have been concerned to analyze the communicativeness of the classroom by comparing it to communication in the real world (Walsh, 2002).

In short, questioning, communicative activities, and strategies applied by teachers are important aspects of teacher talk and here we need to observe, not only what kind of questions to be asked, but also how to make effective use of communicative activities and strategies. Most EFL students learn English from their teachers in classrooms. So in English teaching and learning, classroom study is essentially important. On the one hand, everything that happens in the classroom happens through a process of live person-to-person interaction. On the other hand, students should have sufficient amount of time to speak and practice the L2 and moreover the amount of TTT should not deprive students' opportunities to speak (Cullen, 1998).

Statement of Problem

Providing an opportunity for language learners to speak in the target language is one of the most important factors for them to practice the target language in the classroom. As teachers are the number one source for EFL (English as a foreign language) students to interact with an English speaking model, they should create a kind of classroom environment where students are able to

use the target language and practice as much as they can to speak language accurately and fluently. As a result of the aforementioned reasons, teacher talk time (TTT) referring to the amount of the time teachers talk during lessons, should be as short as possible depending on the tasks and students' level of English to avoid boredom and to make students practice the language a lot in the classroom. A large amount of TTT necessarily limits the amounts of students talking time and this is counterproductive. This is one of the major problems of Okan University preparation class intermediate level students. High amount of TTT reduces these students' motivation and chance to practice their English. If English teachers spend most of the class time speaking and giving instructions and teaching structure, students become silent and this, most of the time, causes boredom and reduces the motivation of the students. EFL teachers should just try to reduce their talking time as much as possible and provide a lot of corrective feedback and also engaging and interesting activities for students to speak in English. All of this does not mean that TTT is always bad and teachers should never talk in class, as this is not possible. Consequently, it is necessary to reduce TTT and give students necessary corrective feedback and more chance to speak in the classroom. To reach this aim and provide some suggestions and solutions to the TTT problem mentioned above, there is a need for a study on this field.

Hypothesis and Research Questions

In my school, we have been aiming to achieve 20-30% TTT as a general guideline for all of our classes regardless of students' ages and levels. In this study, I chose a class in which I had often felt that we were exceeding this guideline. The students in this class, due to the combined effects of their ages, levels and personalities, had often become highly excited. The main aim of this study is to determine if there is any effect of the amount of TTT on EFL learners' accuracy in speaking in English. In order to carry out the purposes of the study, the following research question was emerged:

Does the amount of teacher talking time (TTT) have any significant effect on Okan University preparation class intermediate level students' accuracy in speaking in the target language - English? If so, how?

The following hypothesis is formulated to be examined in the study:
The high amount of teacher talking time (TTT) has a negative effect on Okan University preparation class intermediate level students' accuracy in speaking in the target language – English.

Subsequently, based on the results of the first analysis, I implemented several changes to the participant teacher's teaching approach for the same class. I evaluated these changes by comparing TTT and student talk time (STT) in the first and second lessons (before and after the changes were applied). In particular, I explored the following questions to investigate the effectiveness of the changes:

- Was there any change in the amount of TTT after the changes were implemented?
- What was the effect of the changes on the content of the teacher's utterances and on the students' accuracy in English?
- What was the effect of the changes on the amount of STT and the contents of the student's utterances?

- Were there any changes in the way TTT (teacher's utterances) influenced STT (student's utterances) after the implementation of the changes? (questions were adapted and adopted from the study of Davies (2011)).

What was the effect of corrective feedback provided by the teacher?

Expectations

The following expectations address how to counter the hypothesis:

- Leaning away from teacher-dependent activities, and promoting and increasing learner-involvement (Burns, 1999: 57), the need for teacher talk will be reduced.
- Additional lesson planning will restrict boundaries of (teacher talk) TT. Simpler class materials requiring fewer instructions, leading to a clear lesson structure, will reduce TT. Students should receive greater opportunities to self-discover language.
- Students will have a chance to improve their accuracy while speaking and writing with the help of corrective feedback from their teacher.

Upon assessing the goals and towards whom the lesson is focused, the participant teacher should make more informed decisions about how to adopt more student-led activities and give corrective feedback effectively.

The Present Study

Classroom and Students in This Action Research

The current action research (AR) was conducted in English Language Preparation School at Okan University in Istanbul. The class chosen for this AR consisted of 25 students (Table 1) who are from different cities in Turkey and their age range is between 17 and 18. All of the students will study medicine after English preparation class. The students have 24 English lessons including 12 main course lessons and 12 reading and writing lessons from Monday to Friday between 8.45 am to 1 pm. They have only 4 lessons on Fridays. At the time of the observation and recording, they had been studying together for approximately 6 weeks. The main course book instructed by a native English speaker with 2 years of TEFL experience, Cutting Edge Intermediate, encourages the use of four skills. The main course book provides engaging in-class activities to make students practice the target language communicatively. The reading and writing book Q Skills Intermediate, instructed by a Turkish teacher with 6 years of TELF experience, provides students a lot of reading and writing activities and aims to extend students' current lexical knowledge with the help of engaging texts.

Table 1 The Class Chosen for This AR

Gender	Age	Number	Percentage
Male	17 – 18	9	36%
Female	17 – 18	16	64%

Although there are some level differences depending on their previous education, all students' levels in terms of their English proficiency would be classified as mid-intermediate (Table 2). In order to specify the participant students' level of English, I took their proficiency exam and quiz results they had so far into consideration. I also asked for further help from the participant teacher

during this process. According to the exam results, the participant students' English proficiency levels are indicated in the following table (Table 2);

Table 2 Target Group Learner Speaking Proficiency

Proficiency level	Generic description	Out of 25 sts
Intermediate	- Ability to create with the language. Combining and recombining learned elements, though primarily in a reactive mode; - initiate, minimally sustain, and close in a simple way basic communicative tasks; - ask and answer questions.	3 (12%)
Intermediate-Low	Can successfully handle a limited number of interactive, task-oriented, and social situations. Can ask and answer questions, initiate and respond to simple statements, maintain face-to-face conversation, but highly restricted and containing much linguistic inaccuracy. Can introduce self, order a meal, give directions, and make purchases. Vocabulary adequate to express elementary needs. Strong inference from native language may occur. Misunderstandings frequently arise, but with repetition Intermediate-Low speaker can generally be understood by sympathetic interlocutors.	3 (12%)
Intermediate-Mid	Can successfully handle various uncomplicated, basic, communicative tasks and social situations. Can talk simply about self and family members. Can ask and answer questions and participate in simple conversations on topics beyond most immediate needs. Utterance length increases slightly, speech characterized by frequent long pauses. Incorporation of smooth basic conversational strategies often hindered as speaker struggles to create appropriate language forms. Pronunciation may continue to be influenced by L1. Misunderstandings may still arise, but the Intermediate-Mid speaker can generally be understood by sympathetic interlocutors.	17 (68%)
Intermediate-High	Can successfully handle most uncomplicated communicate tasks and social situations. Can initiate, sustain, and close a general conversation using various strategies appropriate to a range of topics and circumstances, but errors are evident. Limited vocabulary necessitates hesitation. Some slightly unexpected circumlocution. Evidence of connected discourse, particularly for simple narration and/or description. The Intermediate-High speaker can generally be understood, but repetition may be required.	2 (8%)

based upon ACTFL Proficiency Guidelines 1986 (in Brown, H. 2001: 100)

Table 3. Learner Types and Personality Factors of Target Group

Learner types; Personality factors	Description	(out of 25 students)
'concrete' learners	Learners tend to like games, pictures, films, video, using cassettes, talking in pairs and practicing English outside class.	6 (24%)
'analytical' learners	Learners like studying grammar, English books, studying alone, finding their own mistakes and working on teacher-set problems.	6 (24%)
'communicative' learners	Learners tend to like learning by watching TV in English, listening to NSs*, talking to friends in English, learning new words by hearing and conversations.	9 (36%)
'authority-oriented' learners	Prefer the teacher to explain everything, like to have own textbook, to write everything in a notebook, to study grammar, learn by reading, learn words by seeing them.	4 (16%)

(taken and adapted from Nunan, 1991: 170)

The participant students will study Medicine in English and they have a very high motivation towards English. As they have to pass the prep class to start their department, they study hard and attend their classes regularly. According to my in-class observation, the students are also very willing to participate in the activities and games held in classroom and perform well in individual, pair and group works. In order to describe the students' personality and type of learning, I designed a questionnaire including 15 questions (Appendix 1). I explained the aim of the questionnaire to

the participant students and asked for their permission if they wanted to take part in my action research. All of the students wanted to take their part in the questionnaire. The results of the questionnaire completed by the students in their L1 shows the students' preferred learner styles for L2 main course lessons and personality factors (Table 3):

The information in tables 2 and 3 determines the fact that if teacher talk time (TTT) is high, then clearly the students receive few opportunities to self-create and discover language. To continue with such TTT would affect learner-autonomy and their attitudes and motivation in a negative way. However, for as long as the participant students expect the native teacher's main course lesson to provide them more chance to practice English and use English more in the classroom. The tables also indicate the fact that teachers should plan and organize their lessons to provide those expectations of the students. Furthermore, the groupings in table 2 are not truly indicative of the students' overall L2 ability; the students have received high exposure to 'structure-based' reading and writing and they have received very little exposure to listening and speaking. However, according to my in-class observations, the participant students are open to and perform well on speaking and listening activities in the classroom. Because 17 learners are categorized as Intermediate-Mid and 2 as Intermediate-High, the participant teacher is not the only proficient speaker in the classroom so the teachers of this class can expect the students to take increasing responsibility for performance (Burns and Joyce, 1997: 99).



The Teacher in This Action Research

The participant teacher is a native speaker of English and is from the USA. She is 25 years old and has 2 years of TEFL experience. She is a TESOL certified English teacher. She studied business administration at university in the USA. This is her first year in Turkey. Before I started observing and recording her classes, I asked for permission and it was granted by her. Throughout the observations and action research process, she cooperated with me and after the first 3 lessons I observed and recorded, we planned and designed at least 3 more lessons together and I also observed and recorded these lessons as well. She was very helpful. I shared the results of my action research with her. At the end of the action research and reflections she received, I believe that she became more self-aware of her teaching as she started sharing her plans and the activities she designed for her classes to get some more ideas and feedback.

Pre-Research Teacher Evaluation

Prior to undertaking this action research, I, as a teacher of English, am concerned that how much time English teachers consume on talking during lessons and its effect on students' proficiency of English and accordingly on students' accuracy. Before conducting the research, I asked the participant teacher to complete the teacher questionnaire (Appendix 2) I prepared by adopting and adapting some questions from the studies of Nunan (1991) and Brown (2001). The questionnaire included 10 open-ended questions. According to her answers, she thinks that teachers shouldn't talk too much in the classroom in order for students to have more chance to practice the target language in the classroom. She states that she talks only 30% of the class time (Table 4). During her talking, she points out that she presents the subjects, organizes activities, asks questions and gives feedback. She also states that if the learners' levels are high enough, the administration is supportive, and the curriculum is flexible enough, she thinks less than 10% teacher talk is possible. However, it is difficult.

Table 4.

(i) Amount of time she thinks she spends talking in class	0-20%	20-40% 	40-60%	60-80%	80-100%
(ii) Amount of time she thinks she should spend talking in class	0-20%	20-40%	40-60%	60-80%	80-100%
					

At this point she claims that 50% of the class time is allocated for her students to speak. However, she describes her classes as a blend, but probably more teacher-centered. The students turn to her for instructions, guidance, and structure in the classroom, but they are responsible for their learning. Much of the student work is done outside of class, through online activities and supplemental resources. She gives her students opportunities for creativity in class, as well as the tools to enhance their own learning outside of class. She also states that she prefers asking open-ended questions. She goes on to say that at the beginning of each course, many of her students answer questions in the shortest/fastest way possible. If they can simply answer yes/no/fixed answers, they will. When students answer open-ended questions, they are forced to generate their own ideas. Speaking is her students' most difficult skill. Once they have the ability to form full sentences, she occasionally asks fixed-answer questions. However, she concludes that she also teaches her students how to expand a conversation with follow-up details and response questions. A major issue that continues to challenge language teachers is how to ensure that learners develop accuracy and complexity in their speaking, as well as fluency. Teachers know that too much corrective feedback (CF) can make learners reluctant to speak, while not enough may allow their errors to become entrenched (Hunter, 2011). Considering this fact in mind, in the questionnaire, I included a question about error correction. At this point, she states that she recasts spoken errors to her students in the correct form, sometimes as a direct statement, sometimes as a question to show interest or to ask for clarification. She has her students email her their written work, then she highlights their errors in different colors (yellow = grammar, spelling, word choice, red = formatting or punctuation). She returns their written work via email and allows the students to figure out what their errors are. She walks around the room during individual/group/pair work to scan for verbal and written errors. While grading exams, she writes down the most common errors she sees, and goes over them with the students during their following lesson. She finally states that she is also available during tutorial hours and in her office for additional questions.

Methods

Data Collection

Two sets of three lessons (before and after the implementation of the changes) were recorded using a MP3 digital recorder. The recordings were made 2 days apart. To minimize the effects of being 'observed' and to control other variables which could affect the teacher's and the students' performance, the following guidelines were applied for both recordings:

- Although the students approved the conduction of the current study, the recording dates were not specified.
- Both recordings were conducted during the students' scheduled lesson time in their usual classroom.
- The recording device was hidden.

- The different lesson plans were used for both sets. The students focused on different topics, language expressions and activities.

Here, it should be noted that the lesson topics, language expressions and activities were already familiar to the students at the time of the first recording.

The instrument used for this study was designed to capture what the teachers and students were doing during the lesson and which language was being used. It was designed in reference to other instruments which measure classroom interaction and the features of communicative language teaching (e.g. Malamah-Thomas 1987; Spada 1990). At each minute of a lesson, I recorded two things:

What the teacher was doing (presenting, organizing, asking questions or giving feedback) and in what language (English or Turkish)

What the students were doing (speaking, listening, reading or writing) and in what language (English or Turkish). If the students were speaking, the results recorded what kind of speaking they were doing (alone, in pairs, groups or chorusing).

I had some concerns that recording teacher and student activities every minute would be too demanding, but this proved not to be so as my task was to make a quick notation of what was happening in the classroom, and not to make any comment on, or critical observation of classroom activity.

Data analysis

The data analysis involved mostly descriptive statistics, averages to measure teacher and student talk time (STT) and other activities in the classroom. In order to ensure the rigorousness of the analysis, the data were analyzed independently and carefully.

Findings

Executive Summary

The purpose of this study was to indicate the extent of change observed in the classroom practice, the amount of teacher talk and the supporting of students' accuracy in English. It was a small scale quantitative observation study of teacher talk and its effect on students' accuracy. A feature of improved English language teaching is an increase in the amount of student talk in lessons, as well as an increase in the use of the target language by both teachers and students and a decrease in students' mistake and an improvement in their fluency and accuracy which is the main focus of this study. Thus this study also focused upon the use of English by teachers and students, the extent of teacher and student talk time, the nature of the teacher talk, as well as the nature of the activities that students took part in. In total 6 lessons of the participant teacher were observed. During the first 3 lessons the participant teacher used her own lesson plans and activities she designed for her students. I didn't intervene with her teaching methodology during these lessons. During the last 3 lessons, the participant teacher and I worked together and designed everything related to the lessons and used the main course book as the source and followed the syllabus designed by Okan University. The main aim of the cooperation here is to reduce the TTT and decrease students' errors and mistake related to their accuracy. In the following sections, related results are presented.

Primary Findings of the First 3 Lessons

Teacher Talking vs Student Talking

The data I acquired during the first 3 lessons indicate that the average percentage of teacher talk was 35.5%, while the average percentage of students talk time was 17.8%. The students were engaged in listening activities for 11.1% of time, in reading activities for 15.5% of the time and in writing activities for 13.3% of the time (Figure 1). Also Table 5 below shows the proportion of teacher and student talk for each lesson.

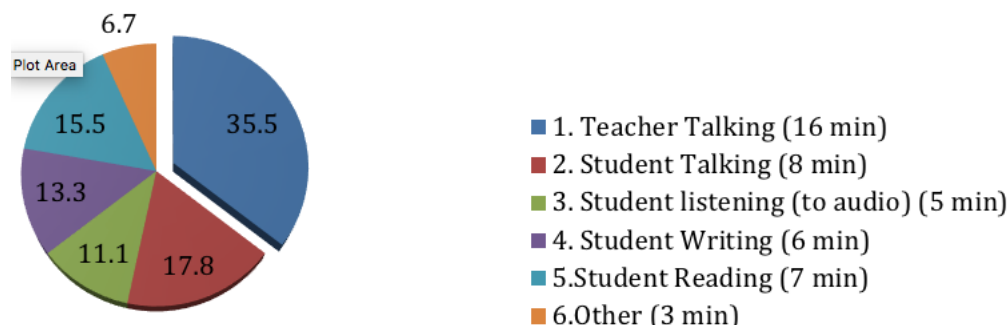


Figure 1. Percentage of talk and other activities in the first 3 lessons (primary)

Table 5 Proportion of Teacher Talking Time To Students Talking Time

First 3 Lessons	Teacher Talk Time(%)	Students Talk Time (%)	Other Activities (%)
Lesson 1	16.30 min (36.2%)	6.50 min (14.4%)	21.40 min (47.5%)
Lesson 2	14.15 min (31.4%)	9.20 min (20.4%)	21.25 min (47.2%)
Lesson 3	17.15 min (38.1%)	8.30 min (18.4%)	19.15 (42.5%)

Teacher Talk

Types of Teacher Talk

As the participant teacher is the native speaker of English and is able to speak very little Turkish, she spoke in English throughout the lessons I observed. When the teacher was talking (approximately 16 minutes in a lesson), she was presenting 31.25% of the time, organizing 43.75% of the time, giving feedback 12.5% of the time, asking questions 12.5% of the time.

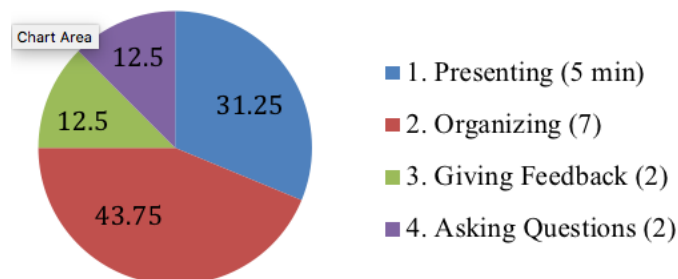


Figure 2. Types of teacher talk

The high percentage of time spent presenting and organizing seems to indicate that the participant teacher was talking too much during lessons and this – accordingly- reduced the amount of students talk time. During the first 3 lessons, as far as I observed, the teacher was very controlled and the

lessons were highly teacher centered. The teacher also ignored some important grammar and lexical mistakes and did not give them necessary corrective feedback. I observed that some students were making the same grammar mistakes over and over again including strong students. As a result of this, I also saw that some weak students were repeating their friends' mistakes. For example: one of the students said that;

“I don't have to taking antibiotics when I am ill.”

Here, the teacher was expected to take her notes –written or keeping in mind- and correct the student's mistake later when the student was done with speaking. Later I heard some of the students making the exact same mistake. I observed the same issue during the first 3 lessons and took my notes about it. On the other hand, the teacher was spending too much time on presenting the subjects, activities and exercises included in her materials and the course book as well. Too much presentation of subjects and instructions were affecting students' understanding in a negative way as everything was clearly instructed in the present materials.

Some Samples From Teacher Talk

Presenting

31.25% of the time when the teacher was talking, she was presenting materials and the exercises in the course book. 100% of that time, the teacher was presenting in English. The following box explains what is meant by “presenting”.

The teacher was giving information to the students. She was describing, explaining or narrating, whether from the textbook or from her own knowledge, or from any other source. Students were expected to listen to the information. Examples include:

- _ *This reading text is about the blessings in our lives.*
 - _ *Make a list of three things you love and three things you hate.*
 - _ *Drinking contaminated water can cause diseases.*
-

Organizing

43.75% of the time when the teacher was talking, she was organizing. 100% of that time, the teacher was organizing in English. The following box explains what is meant by “organizing”.

The teacher was telling the students what to do. Students were expected not only to listen, but also to do something according to the teacher's directions. Examples include:

- _ *OK students, now turn and face your partner.*
 - _ *I want you to look at me and listen carefully.*
 - _ *Makbule, can you answer the following question?*
 - _ *It's time to open up your notebooks and write down the words on the board.*
-

Giving Feedback

12.5% of the time when the teacher was talking, she was giving feedback. 100% of that time, the teacher was giving feedback in English.

Feedback can be either positive or negative and may serve not only to let learners know how well they have performed but also to increase motivation and build a supportive classroom climate. During the first 3 lessons, as far as I observed, the participant teacher was not giving enough

feedback and I believe that little amount of supportive feedback made some students reluctant to speak and take part in question answer exercises.

The following box explains what is meant by “giving feedback”

The teacher was responding to something students had said or done, and evaluating or commenting on it. Examples include:

- *Yes, Onur, that's correct.*
- *Not quite right. You need to use gerund after “look forward to”.*
- *Well done, guys.*

Asking Questions

12.5% of the time when the teacher was talking, she was asking questions. 100% of that time, the teacher was asking questions in English. Questioning serves as the principal way in which teachers control the classroom interaction. During this time, the participant teacher had a great chance to have her students talk and realize their mistakes and help them with these mistakes accordingly. As the English level most of the students is mid-intermediate, they are able to comprehend the questions and organize their answers in a very short time in comparison to low level students and give accurate and fluent answers. The teacher did not spend enough time on asking question as there were some very communicative and up-to-date reading texts which were familiar to the students. The following box explains what is meant by “asking questions”.

The teacher is asking questions or eliciting information. Students are expected to respond verbally (as opposed to organizing, when the students respond non-verbally). Examples include:

- *Do you know why people use a lot of antibiotics?*
- *Now I want you to think carefully and explain why we need vitamins in our diet.*
- *Can you tell me why we shouldn't consume a lot of sugar?*

Student Talking: English vs Turkish

Four skills are generally considered necessary to be included in an integrated approach to language teaching: speaking, listening, writing and reading. In the first 3 lessons I observed, students were speaking in 17.8% of the lesson time. They were engaged in listening activities with the audio player for 11.1% of the time, in reading activities for 15.5% of the time and in writing activities for 13.3% of the time (see Figure 1). It can be assumed that the majority of time when students were listening, writing or reading, they were dealing with English individually. These data seem to indicate a large amount of lesson time being spent on reading, writing and listening activities and accordingly speaking activities were not included enough. When students were talking, as the data I collected show that they were using more Turkish when speaking in pair or group works than English in their classrooms: 68.75% (5.5 minutes out of 8 minutes) of the time they were talking, this was in Turkish (Figure 3).

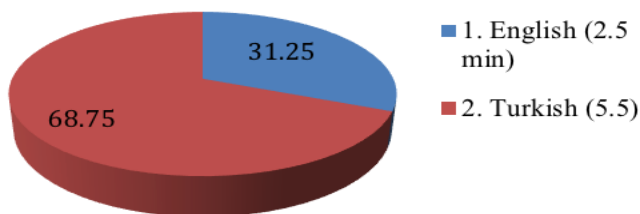


Figure 3. Language used by students

Types of Classroom Activities in Which Student Talk Occurred

In the process of the first 3 lessons observations, the activity types used by the teacher were all grammar based and aimed to have students practice grammar deductively. The exercises and activities included in the book provided enough chance to practice grammar for students. As the students were intermediate-mid and they were good at grammar points or at least it was quite easy for them learn grammar subjects quickly, the students seemed to lose their all interest for the lessons and started to speak with their friends and also play with their mobile phones. The students were good enough to speak English and they needed more practice in speaking and listening than grammar. They completed all the grammar exercises on their worksheets almost without making any major mistakes. However, when they started to speak, the same accuracy level seemed to decrease to some certain levels. Moreover they didn't receive any corrective feedback from their teachers and this made them repeat the same mistakes continuously.

When students were talking, 25% of the time they were talking on their own (e.g. responding to a teacher's question); 18.75% of the time they were taking part in activities in which they were speaking in pairs; 12.5% of the time they were speaking in groups; and in 43.75% of the time they were speaking in chorus (see Figure 4)

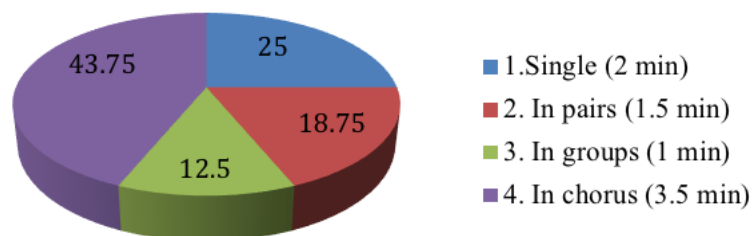


Figure 4. Types of classroom activities in which student talk occurred

Here it can be clearly seen that chorusing activities are the most popular in the first 3 lessons, followed by a single student talking on his or her own. As both pair work and group work featured to a great extent, this seems to suggest an increase in interactive activities where in most lessons students were not interactive at all. According to my observations, the teacher acted the only source of English and dominated the talking time in the classroom. Although the book and materials prepared by the teacher presented some comprehensible input, the students should have included more into the activities with the help of some communicative and engaging activities. The students were all very active and they were all ready to take their parts in the activities but the participant teacher here focused on single and especially chorusing activities. The students were giving the answers all together and during this time some dominant students were being fast and shouting out the answers and the rest of the class were repeating the same answers. At this stage of the lessons, some students made some grammatical mistakes and the teacher didn't give necessary corrective feedback for these errors. Chorusing activities were making the class so loud and some weak students were not able to follow the lesson as they were highly confused.

Table 5. Students' Talk: English vs. Turkish (the First 3 Lessons)

Types of student talk	% English	% Turkish
Single	62,5%	34,5%
In pairs	33,3%	66,7%
In groups	25%	75%
In chorus	87%	13%

For each of these types of student activities, the percentage of English and Turkish used was calculated. In each of the categories, Turkish was used for a large majority of the time during single, pairs and group activities (see Table 5).

Summary of Primary Findings of the First 3 Lessons

As the total lesson time of the classes I observed varied, the percentages of lesson time spent on the different activities measured might look like this, on average: If the lesson was a total of 45 minutes, the teacher was talking for about 16 minutes and the students were talking for about 8 minutes of that time. For 5 minutes of the lesson, the students were listening to audio materials, for 7 minutes they were reading and for 6 minutes they were writing. Of the 8 minutes when students were talking, they were talking in English for 2.5 of those minutes. Of those 8 minutes, students were chorusing for about 3.5 minutes, speaking in groups for about 1 minute, and speaking in pairs for about 1.5 minutes and a single student was talking for about 2 minutes. These activities were happening in Turkish the majority of the time (roughly 68.75%). Of the 16 minutes when the teacher was talking, she was talking in English for 100 % of those minutes. Of those 16 minutes, the teacher was asking questions for 2 minutes, presenting for 5 minutes, giving feedback for 2 minutes and organizing for 7 minutes. These activities were happening in English. Other activities were going on for 3 minutes. The above mentioned data indicated the fact that the participant teacher should design her classes very carefully and use more communicative and interactive activities as the ones she claimed in the teacher questionnaire that she was using. Considering the data I got so far from the first 3 lessons I observed, students should be involved in more communicative activities where they will be able to practice their English and speak more English when they work in pairs, groups and single. I also realized that the teacher didn't pay enough attention to the students' grammatical and lexical errors. While speaking in English, some students were repeating the same mistakes and didn't get any feedback from the teacher. According to my observations, the participant students made the following kinds of errors and received no corrective feedback from their teacher;

The total number of errors which were found in the spoken data was classified into 7 categories: tense, article, past participle, infinitive, article, preposition and structure.

Three kinds of grammatical errors: tense, article, and preposition were the main mistakes that the participant students made while speaking. The most frequent error concerning tense is the confusion between past and present tenses. Present tenses were used for the past, though adverbial phrases showing time were used correctly. Even though they understood the time difference, they kept making tense related errors when speaking individually, e.g.

Student1: The ozone layer gets damaged decades ago.

Teacher: Yeah, you are right!

Student 2: They learn about the danger when the media warned them and they didn't do anything about it. But now it was too late.

Student 3: They are already good friends in 1934 and they work together until Einstein diein 1955.

The learners also could not monitor function words such as articles and prepositions. Unnecessary prepositions were put into sentences mainly because of set phrases or chunks that the learners had

acquired. For example, one of the participant students said “go to shopping” instead of “go shopping” because she acquired the phrase “go to” as a chunk. Some participant students repeated errors of tense, articles, and prepositions many times in their speeches. The subjects were confused with the usages of cardinal numbers and ordinal numbers when they mentioned dates.

The participant students’ level of English was good enough to overcome the abovementioned errors. However they weren’t provided by the necessary corrective feedback and they didn’t have a chance to realize and correct their mistakes. The problem was that the participant students knew the grammar rules and they could form completely correct sentences in English on their worksheets distributed by their teacher. When it came to speaking, the students were not aware of the errors they made and kept repeating the same mistakes over and over.

After the observations of the first 3 lessons, I asked the reason why she –as the teacher of English– didn’t correct students’ errors, she stated that she didn’t want to decrease students’ motivation and had students realize their own mistakes. Here it is clearly seen that the teacher needed some feedback on some certain points. I tried to help her with some issues related to teaching and classroom management. During the first 3 lessons, I observed the participant teacher’s classes without suggesting anything related to the subjects or problems in the class. In these lessons, the amount of teacher talk was high and students were not speaking in English as much as they needed. The amount of students’ Turkish talking time was also very high even though the teacher couldn’t speak in Turkish. For the following 3 lessons, I offered her some help to design and plan her lessons. She was quite happy and accepted my offer. Together we had some small talk and brainstorm sessions related to her previous 3 lessons and revised everything I had written down during my observations. She also took some notes and planned some more communicative and engaging activities and we tried to adapt these activities to her following lessons. In the next section of this study, I observed her following lessons we designed together.

Secondary Findings of the Last 3 Lessons

After the first lessons that I didn’t intervene with anything related to the lesson plan and activity design etc, I started to observe the last 3 lessons. Before observation of the lessons, the participant teacher and I worked together to plan the lessons and organize the activities. We discussed about some certain things related to the first 3 lessons such as what students at this level need, the language students use in the classroom, the importance of communicative activities and giving corrective feedback when students make mistakes affecting their accuracy in speaking. As errors with the language quickly become fossilized, students continue to make the same mistakes again and again. They thus sound less fluent and capable with the language than in truth they are, which presents a problem when students use the language for more than casual conversation (Hunter, 2011). Taking everything into consideration, we planned and designed three lessons together following the current syllabus and the main course book. The activities were all communicative-based and supported by the extra materials such as videos, listening exercises and the questions related to the reading texts included in the main course book. We tried to choose short reading texts. In other words, we tried to create more student-centered classroom and discover communicative aspects of the main course book in this perspective.

Teacher Talking vs. Student Talking

The data I acquired during the last 3 lessons indicate that the average percentage of teacher talk was 27.3%, while the average percentage of students talk time was 25.3%. The students were

engaged in listening activities for 11.1% of time, in reading activities for 11.1% of the time and in writing activities for 15.5% of the time (Figure 5). Also Table 6 below shows the proportion of teacher and student talk for each lesson.

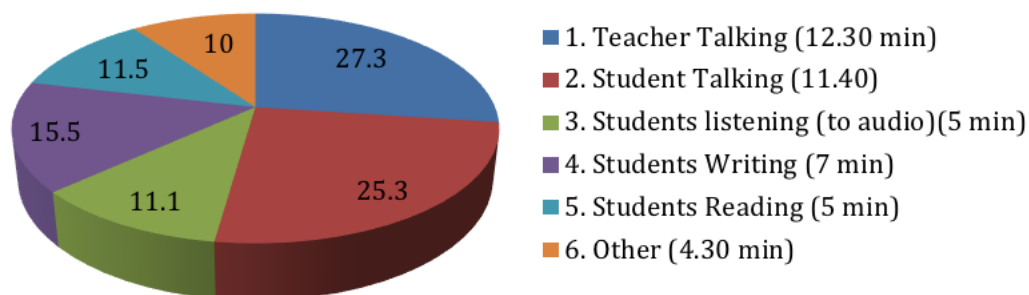


Figure 5. Percentce of talk and other activities in the last 3 lessons (secondary)

Table 6 Proportion of Teacher Talking Time to Students Talking Time

Last 3 Lessons	Teacher Talk Time(%)	Students Talk Time (%)	Other Activities (%)
Lesson 1	13.30 min (29.5%)	11.10 min (24.8%)	21.40 min (47.5%)
Lesson 2	11.30 min (25.1%)	12.40 min (27.5%)	21.25 min (47.2%)
Lesson 3	12.30 min (27.3%)	11.00 min (24.4%)	19.15min (42.5%)

Teacher Talk

Types of Teacher Talk

When the teacher was talking (approximately 12.30 minutes in a lesson), she was presenting 24.4% of the time, organizing 16.25% of the time, giving corrective feedback 27.6% of the time, asking questions 26% of the time (Figure 6).

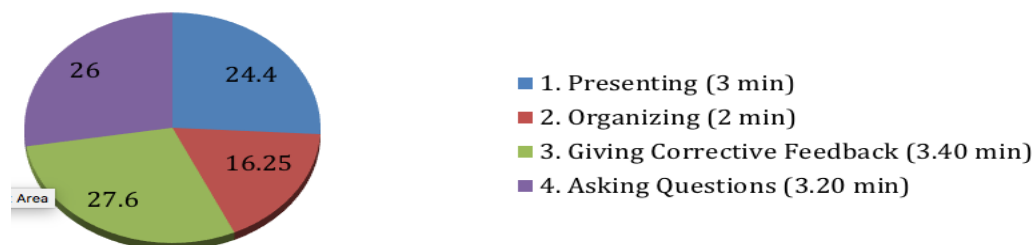


Figure 6. Types of teacher talk

The high percentage of time spent asking questions, organizing and giving feedback seems to indicate that the participant teacher was making great efforts to involve her students in their English lessons. During the last 3 lessons, the teacher did her best to reduce her talking time in order for her students to have more time and chance to speak. She asked as many questions related to reading texts, listening activities, etc as she could. She also didn't spend too much time on presenting the subjects and target language as they were clearly instructed and explained in the book. The only thing she did during these lessons was to make everything easier for students to understand. She just solved the problems which were causing confusion in the classroom.

As the students are very likely to make grammatical and lexical mistakes while speaking, they need their teachers help and support and some corrective feedback to learn from their own mistakes. The participant teacher spent approximately 3.20 minutes on giving corrective feedback.

While speaking about a video about green cities in the world, her students made some comments after a question the teacher asked and they were making some grammatical and lexical mistakes such as;

Student 1: The presenter believing that Mastar city is a true city of the future.

Student 2: We need build more cities like Masdar.

Student 3: I would like to live a city looking as Masdar.

The sentences above and some others were produced by the students. The teacher was listening to the students and she didn't interrupt them. When they were done with speaking activity, she started to talk about the mistakes students made and she wrote the correct forms with some other examples. I observed that the students were taking their notes.

The Kinds of Corrective Feedback the Students Received

In order to correct students' errors while they were speaking, the participant teacher and I prepared some strategies to apply in the classroom. The model proposed by Lyster and Ranta (1997) were used for this study. The following steps were taken during the correction of the students' mistakes;

Explicit Correction: Clearly indicating that the student's utterance was incorrect, the teacher provides the correct form.

S: Suzanne live in Germany before going to the States.

T: + lived

Recast: The teacher implicitly reformulated the student's error and provided the correction without directly pointing out that the student's utterance was incorrect.

S: David like pop music.

T: yes, he likes pop-music

Metalinguistic Clues: The teacher provided comments or information related to the formation of the student's utterance without providing the correct form.

S: They received some informations about the secret plan of the prisoners.

T: + Is "information" a singular or plural noun? Yes, it is a singular noun.

Elicitation: The teacher directly elicited the correct form from the student by asking questions by pausing to allow the student to complete the teacher's utterance

S: Suzanne went to swimming at weekends and she liked it a lot.

T: Suzanne went...? (one of the students completed the sentence: Suzanne went swimming.)

Student Talking: English vs Turkish

Four skills are generally considered necessary to be included in an integrated approach to language teaching: speaking, listening, writing and reading. In the last 3 lessons I observed, students were speaking in 25.3 % of the lesson time. They were engaged in listening activities with the audio player for 11.1% of the time, in reading activities for 11.1% of the time and in writing activities for 15.5% of the time (see Figure 5). It can be assumed that the majority of time when students were listening, writing or reading, they were dealing with English individually. These data seem to indicate a large amount of lesson time being spent on reading, writing and listening activities and accordingly speaking activities were also included enough. When students were talking, as the data I collected show that they were using more English when speaking in pair or group works than Turkish in their classrooms: 79.1% (8.10 min out of 12.30 min) of the time they were talking, this was in English (Figure 7).

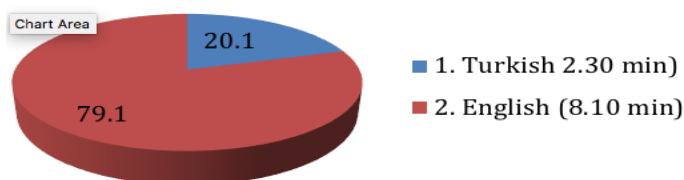


Figure 7. Language used by students

Types of Classroom Activities in which Student Talk Occurred

In the process of the last 3 lessons observations, the teacher used a lot of communicative and engaging activities to make students practice the target language more. The teacher and I worked on the activities and exercises in the book and support them with some videos, listening tracks and we designed some questions related to the reading texts in order to make students speak more in pairs or groups.

When students were talking, 24.3% of the time they were talking on their own (e.g. responding to a teacher's question); 43% of the time they were taking part in activities in which they were speaking in pairs; 24.3% of the time they were speaking in groups; and in 8.1% of the time they were speaking in chorus (see Figure 8)

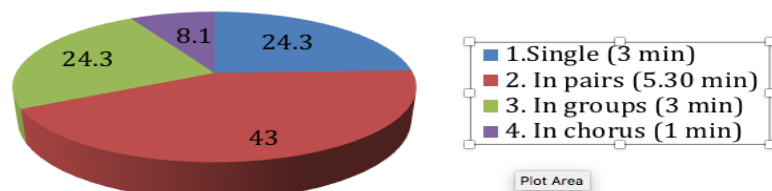


Figure 8. Types of classroom activities in which student talk occurred

Here the data indicate that the students were interacting with their partners most of the time they were speaking and they were all included in pair works most of the time. The great increase in pair and group works gave weak students more time to work on their language, in other words they had a great amount of time and chance to practice the language and speak. When students were working in pairs and groups, the teacher was walking around the classroom and help students. While doing so, I observed that the teacher was taking some notes. In comparison to the first 3 lessons, the

students were speaking in English. When the students –especially weaker students- were trying to speak in Turkish, the teacher was kindly warning them to switch to Turkish again.

For each of these types of student activities, the percentage of English and Turkish used was calculated. In each of the categories, English was used for a large majority of the time during single, pairs and group activities (see Table 7).

Table 7: Students' talk: English vs. Turkish (the Last 3 Lessons)

Types of student talk	% English	% Turkish
Single	76.6%	23.4%
In pairs	79.2%	20.2%
In groups	66%	34%
In chorus	82%	18%

Summary of Secondary Findings of the Last 3 Lessons

As the total lesson time of the classes I observed varied, the percentages of lesson time spent on the different activities measured might look like this, on average: If the lesson was a total of 45 minutes, the teacher was talking for about 12.30 minutes and the students were talking for about 11.40 minutes of that time. For 5 minutes of the lesson, the students were listening to audio materials, for 5 minutes they were reading and for 7 minutes they were writing. Of the 11.40 minutes when students were talking, they were talking in English for 8.10 of those minutes. Of those 11.40 minutes, students were chorusing for about 1 minute, speaking in groups for about 3 minutes, and speaking in pairs for about 5.3 minutes and a single student was talking for about 3 minutes. These activities were happening in English the majority of the time (roughly 79.1%). Of the 12.30 minutes when the teacher was talking, she was talking in English for 100 % of those minutes. Of those 12.30 minutes, the teacher was asking questions for 3.20 minutes, presenting for 3 minutes, giving corrective feedback for 3.40 minutes and organizing for 2 minutes. These activities were happening in English. Other activities were going on for 4.50 minutes. The above mentioned data indicated the fact that the participant teacher used a lot of communicative and engaging activities and kept her students busy with pair and groups works more than the previous 3 lessons. According to my observations, starting from the first lesson of the second part, students became more active and they didn't get very bored throughout the last three lessons. They had enough chance to speak and involve in activities with their friends and they were interacting more. Furthermore, the students got corrective feedback when they made mistakes while speaking. The teacher was very careful when correcting students' mistakes in order not to interrupt their speaking and demotivate them. She was taking notes of the mistakes her students made during single, pair and group works and correcting them after they finished speaking.

Conclusions

In the first 3 lessons I observed, the teacher talked more than the students and couldn't use her time efficiently to provide necessary corrective feedback for her students to reduce their errors in speaking. As the students' level was enough to speak English fluently, the error they made affected their accuracy in speaking English. The students showed a very good performance in writing activities and didn't make any major grammatical error whereas they didn't show the same performance on speaking and made and repeated the same errors continuously. The teacher spent most of her time on organizing the activities and presenting the subjects as everything was clear and understandable enough for students and they didn't need to hear the same instructions repeatedly.

In the last 3 lessons, the participant teacher and I worked together to design activities and exercises to increase the student talk time and provide students more corrective feedback. During the last 3 lessons, the participant students were all very active and took their part in the activities. The teacher reduced the time she spent on organizing and presenting and accordingly increased the time she provided corrective feedback to help students overcome the errors they made while speaking. The lessons we designed were highly active in comparison to the first 3 lessons. The teacher avoided immediate feedback in order not to interrupt the students and tried to write down the errors students made. We inspired from Lyster and Ranta (1997) model and decided on some strategies to correct the students' mistakes. As a result, I observed that the participant students became more aware of their mistakes and didn't tend to repeat their mistakes. Especially, I observed that some students were taking some notes of the corrections provided by the teacher. In this small scale study, my main focus was to reduce teacher talk as much as possible. While doing this, I considered the fact that reducing teacher talk time (TTT) does not mean to make the teacher all silent in the classroom. My main focus is to help the teacher use her time as effectively as possible and increase the quality of TTT which refers to the effectiveness and supportiveness function of TTT.

Implications

This small scale study is important indicate the importance of the quality of teacher talk in the classroom, the corrective feedback and the professional development of teachers. As teachers provide knowledge and are taken main source in the classroom, their speech and talk in the classroom are taken very crucial for students' improvement. However, for teachers to help their students more, they should increase the quality of their talk in the classroom. This is only possible with the help of professional development and interaction with other teachers. Teachers should receive necessary training and guide throughout their profession so as to cope with the increasing demands of students. At this point institutions should provide them with necessary in-service training and professional development. In contrast to common belief, students are always responsible for their learning alone. They need some professional help from their teachers. If teachers improve themselves and become more self-aware, they can solve problems with their students. While conducting this small scale study, I, as a teacher of English, realized the importance of professional help for teachers and witnessed the solutions provided by professional help and its effects on a teacher.

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Appendix

The Questions in Student Questionnaire

1) It is better if the teacher explains everything to me.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

2) I want to be asked questions and given chance to answer in class.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

3) I want the teacher to give problems to work on in class.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

4) I want to answer questions in chorus.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

5) I want to answer questions being called out by names.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

6) I volunteer for answering questions.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

7) I prefer questions those have fixed answers.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

8) I prefer open ended questions without fixed answers.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

9) It would be better if the teacher gives longer time to think about questions.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

10) I want to be encouraged by the teacher's instant verbal feedback.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

11) I want the teacher to point out all errors immediately.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

12) I want to correct my own errors.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

13) I want to discuss about the errors with my friends.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

14) I want to practice the target language in the classroom.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

15) I want more time and chances than now to talk and discuss in classroom.

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

The questions in Teacher Questionnaire

Some people believe that a good teacher is one that says as little as possible. Others believe that students can only learn by hearing their teachers talk. Approximately how much of the total time in classroom do you talk?

a) 100% b) 90% c) 70% d) 50% e).....please specify

Approximately how much of the total time in classroom do your students talk?

a) 100% b) 90% c) 70% d) 50% e).....please specify

How do you encourage your students to speak the target language?

ANSWER:

How do you define your classes, more teacher centered or student centered? Why?

ANSWER:

Do you prefer asking questions those have fixed answers or open ended questions? Why?

ANSWER:

Do you give your students enough time to think about questions?

ANSWER:

How do you correct your students' errors?

ANSWER:

Do you feel you need to make any changes to the amount of verbal input you provide for your students?

ANSWER:

How much of the total time in classroom do your students spend discussing, pair work or group work?

ANSWER:

How much does the teacher talk have to be?

ANSWER:

Part 6: Higher Education and Educational Leadership

Preventing Extra Costs: The Impact of Faculty Satisfaction and Morale

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Abstract

This study examines full-time tenured/tenure-track faculty members' intent to leave one's institution or academe. Utilizing the constructs of work-life, morale, and satisfaction as predictors, the findings suggest that morale was a stronger predictor for intent to leave one's institution, while satisfaction was a stronger predictor for intent to leave academe. In both models, the number of years at the institution was statistically significant. The longer a faculty member stayed at the institution, coupled with positive morale, the less likely they were to leave their institution. However, for faculty who have been at their institution longer, but are not intrinsically satisfied with their work, they were more likely to leave academe.

Keywords: satisfaction, morale, work-life,

Introduction

A faculty member's departure from an institution can have negative consequences, not only for the institution (Carroll, Dickson & Ruseski, 2012; Knight & Leimer, 2010), but for the students they serve (Dwyer, 2017; Kezar & Maxey, 2014). Faculty engagement within the institution positively promotes higher enrollment and investment in academic quality (Carroll et al., 2012), and student-faculty interactions positively influence student persistence (Dwyer, 2017; Pascarella & Terenzini, 2005). There are currently a few researchers focused on faculty retention from a traditional perspective (O'Meara, 2014; O'Meara, Benette, & Niehaus, 2016). However, recent research has been dominated by studies conducted within medical/healthcare related environments (Santiani, Williams, Brod, Way & Ellison, 2013; Yedidia, Chou, Brownlee, Flynn & Tanner, 2014), which do not generalize to the traditional academic environment.

With public higher education constantly facing budget cuts (Katsinas et al., 2016), it is important to understand the issues that contribute to faculty's intention to leave, in order to prevent costly institutional investments. Previous research has focused on two main areas contributing to faculty departures: faculty satisfaction (Daly & Dee, 2006; Rosser, 2005; Ryan, Healy & Sullivan, 2012; Xu, 2008) and faculty morale (Johnsrud, Heck & Rosser, 2000; Johnsrud & Rosser, 2002), with few studies investigating both. Blackburn and Lawrence's (1995) research showed that social knowledge, including environmental responses to the workplace and self-knowledge, influence an individual's behavior. In a study on why faculty leave, 69% of faculty who left cited the work environment (e.g., work-life balance, climate, collegiality) as their reason for departure (O'Meara, Louder & Campbell, 2014).

This study seeks to better understand why faculty members leave, given the various underlying factors or preventative measures that may be considered. Three questions drive this study. First, what elements of faculty work-life, satisfaction and morale explain intent to leave one's institution, or to leave academe? Second, what is the relationship between the constructs of work-life, satisfaction, morale, and intent to leave? Finally, what, if any, differences exist when

considerations are made for faculty demographic variables (i.e., gender, rank, institutional division)?

Literature Review

While many studies examine work-life and intent to leave through a lens of satisfaction or morale, few have utilized both morale and satisfaction as predictors of intent to leave. This study seeks to extend prior research by utilizing the constructs of work-life, satisfaction, morale, and intent to leave.

Faculty Work-Life

Institutional and professional issues have been identified as particularly important for faculty work-life (Johnsrud & Rosser, 2002; Rosser, 2005). Research also suggests that faculty work-life has a significant impact on morale, which in turn impacts intent to leave (Johnsrud & Rosser, 2002). Additional research shows that perceptions of work-life have a direct effect on satisfaction, which also contributes to intended departure (Rosser, 2004).

Satisfaction and Morale

Satisfaction has been shown to have a significant impact on tenured/tenure-track faculty members' intentions to leave (Smart, 1990). Rosser (2005) identified that satisfaction can be represented by both individual (intrinsic) and institutional (extrinsic) dimensions. Previous research included benefits and security in determining satisfaction (Rosser, 2004; Xu, 2008). Focusing more on the intrinsic dimensions, Daly and Dee (2006) defined satisfaction as the affective or emotional response one has toward their job. Morale is a measure of an individual's feelings of loyalty toward their institution based on perceptions of value and support (Johnsrud et al., 2000). Quality of work issues and institutional regard has shown to be effective in defining morale.

Intent to Leave

Just as Blackburn and Lawrence (1995) sought to understand faculty behavior, researchers have investigated faculty intent to leave or stay to identify the contributing factors (Daly & Dee, 2006; Johnsrud & Rosser, 2002; Rosser, 2004; Xu, 2008). Daly and Dee's (2006) research identified satisfaction as the greatest impact on faculty intent to stay. Rosser (2004) identified that both work-life and satisfaction influence intent to leave. Intent to leave has been acknowledged as a last step towards the act of leaving one's institution or career (Daly & Dee, 2006; O'Meara et al., 2014).

Conceptual Frameworks

Faculty Work-Life

Many conceptual frameworks of faculty work-life exist, each of which has been developed to fit a specific institution-based need (Rosser, 2004). One prominent faculty work-life model used in multiple studies consists of professional development, administrative support, and technical support (Johnsrud & Rosser, 2002; Rosser, 2005). Following this model, institutional work-life in this study encompasses compensation and benefits, university and departmental relations, and interpersonal relations, whereas professional work-life encompasses teaching and advising, service and committee activities, research and scholarship, and promotion and tenure.

Satisfaction and Morale

This study focused on the intrinsic dimensions of satisfaction (Daly & Dee, 2006), specifically relating to faculty feelings towards their work-life (e.g., autonomy, satisfaction, enthusiasm). Following Johnsrud and Rosser's (2002) example, this study examined morale as a measure of faculty attitudes related to work-life issues. Included are institutional loyalty, perceptions of value from the institution, administrative support, and fairness.

Methods

Data Source

This study utilized a proprietary data source, where the sample population was full-time tenured/tenure-track faculty members in a research university in the Northeast. Faculty from three academic divisions: humanities, sciences, and social sciences were surveyed. The response rate was 48%, yielding 306 useable cases. Of the 306 respondents, 55% were male and 8% did not disclose gender. Rank included 45% professors, 28% associate professors, and 12% assistant professors. Across divisions, respondents were 36% from humanities, 26% from social sciences, and 30% from sciences.

Measures

The original survey contained 125 questions focused on professional and institutional work-life issues, inter- and intra-departmental relations, personal factors, satisfaction, morale, and intent to leave. Respondents were asked to indicate their level of agreement or disagreement with each question on a five point Likert scale where "1" indicated strongly disagree and "5" indicated strongly agree. There were 56 questions that specifically focused on personal and institutional work-life issues, satisfaction, and morale, which were utilized to explain intent to leave the institution or to leave academe. The excluded questions from the survey were identified as institution specific, and not pertinent to this specific study.

Professional and Institutional Work-Life Issues

Respondents indicated their level of agreement or disagreement with 20 statements about the quality of their professional work-life with regards to teaching, service, research, tenure and promotion. Further, respondents also indicated their level of agreement or disagreement with 29 statements about the quality of their institutional work-life with regards to compensation and benefits, university relations, department relations, and interpersonal relations. Cronbach's alpha for professional work-life and institutional work-life were .700 and .773 respectively.

Job Satisfaction and Faculty Morale

Respondents were asked to indicate their level of agreement or disagreement with 3 job satisfaction questions on aspects of enthusiasm, intellectual stimuli, and autonomy with regards to their own work. The final question asked the faculty to self-report their overall satisfaction with their work. For morale, respondents indicated their level of agreement or disagreement with 7 questions about loyalty to the institution, feelings of value and support from the institution, and sense of fairness regarding their institution. Cronbach's alpha for job satisfaction and morale were .864 and .885 respectively.

Intent to Leave

Intent to leave was separated into two questions. The first asked the respondent to indicate the likelihood of leaving the institution from 1 to 5, with “1” corresponding to “Not Likely” and “5” corresponding to “Very Likely”. The second question asked the respondent to indicate the likelihood of leaving their career or profession on the same 5-point scale.

Multiple Regression

Hierarchical multiple regression analysis was used to investigate the ability of the independent variables (demographics, professional work-life, institutional work-life, job satisfaction, and morale) to predict intent to leave either the institution or academe (Keith, 2015). In the event of missing data, pairwise deletion was utilized to prevent eliminating whole cases from the analysis. Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity. The first block contained the demographic factors: sex, rank, division, and number of years at the institution. The second block entered was the professional work-life construct, followed by the third block, institutional work-life. The fourth block included faculty job satisfaction, followed by faculty morale in the fifth block. The regression model R^2 was used to indicate the amount of variance in intent to leave that was explained by the independent variables.

Results

Intent to Leave the Institution

As illustrated in Table 1, the demographic factors were entered at the first step, explaining 3.9% ($F = 2.72, p < .01$) of the variance in intent to leave the institution. At the second step, professional work-life contributed an additional 3.4% (F change = 9.534, $p < .01$). Institutional work-life, at the third step, contributed an additional 4.4% (F change = 13.23, $p < .001$) towards explaining the variance. After entry of satisfaction at step 4 (satisfaction did not have a statistically significant contribution at $\alpha = .05$) and morale at step 5, the total variance explained by the model was 21.7% of the variance in intent to leave the institution, $F(8, 261) = 9.049, p < .001$. In the final model, only two variables were statistically significant, with morale recording a higher beta value ($beta = -.398, p < .001$) than number of years at the institution ($beta = -.127, p < .05$).

Intent to Leave Academe

From Table 1, the demographic characteristics were entered at the first step, explaining 4.3% ($F = 2.97, p < .05$) of the variance in intent to leave academe. The additions of professional work-life and institutional work-life at the second and third steps did not have statistical significant contributions to the explanation of the variance. At the fourth step, satisfaction contributed an additional 4.2% (F change = 12.27, $p = .001$). After the addition of morale in step 5, the total variance explained by the model was 9.4% of the variance in intent to leave academe, $F(8, 261) = 3.390, p < .001$. In the final model, only two variables were statistically significant, with job satisfaction recording a higher beta value ($beta = -.219, p = .001$) than number of years at the institution ($beta = .211, p < .01$).

Demographic Differences

Group comparison results suggest significant differences do exist based on gender, rank, and division. Males have higher levels of morale, as do faculty in humanities when compared to the hard sciences. Associate professors are more likely to leave their institution when compared to full professors. Work is ongoing to explore the many differences within a structural equation modeling (SEM) framework.

Discussion and Conclusions

Faculty searches are costly and time consuming; this study sought to understand the issues that explain faculty intent to leave, and to determine if there were differences between intent to leave an institution and intent to leave academe. The results of this study indicated that for intent to leave the institution, both morale and years at the institution were statistically significant. If an individual has low morale, their desire to seek a new institution and intent to leave increases; those who have high morale are less likely to leave (Johnsrud et al., 2000). With years of experience, there was a negative correlation (-.136) indicating that the longer one stayed at their institution, the less likely they were to desire to leave, despite their level of morale. Morale contributed most to the model, indicated that low morale is the biggest contributor to intent to leave one's institution.

When it comes to intent to leave academe, both satisfaction and years at the institution were statistically significant. This aligns with the focus on intrinsic satisfaction of individuals' work (Daly & Dee, 2006). If an individual is not satisfied in their job, their desire to seek something new outside of teaching increases, thus leading toward their intent to leave academe. In regards to years at the institution, it is more common for those who have fewer years at the institution to express intent to leave their profession, as they have not fully established themselves. Demographics and satisfaction both contributed significantly to the model, explaining 4.3 and 4.2 percent of the unique variance respectively.

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Appendix

Table 1. Hierarchical Regression Model for Faculty Intent to Leave

Variable (Regression Constant)	Intent to leave institution				Intent to leave academe			
	<i>b</i>	SE B	β	<i>p</i>	<i>b</i>	SE B	β	<i>p</i>
Block 1	5.365	.812		.001	2.203	.485		.001
	$\Delta R^2 = .039, p = .030$				$\Delta R^2 = .043, p = .020$			
Sex	-.214	.150	-.083	.154	.067	.089	.047	.454
Rank	-.131	.096	-.084	.175	-.058	.057	-.068	.312
Division	.106	.085	.071	.214	.038	.051	.046	.450
Years at institution	-.015	.007	-.127	.043	.014	.004	.211	.002
Block 2	$\Delta R^2 = .034, p = .002$				$\Delta R^2 = .001, p = .666$			
Professional Work-life	.221	.219	.070	.312	.110	.131	.063	.400
Block 3	$\Delta R^2 = .044, p = .001$				$\Delta R^2 = .008, p = .134$			
Institutional Work-life	-.304	.229	-.097	.186	-.089	.137	-.051	.517
Block 4	$\Delta R^2 = .012, p = .060$				$\Delta R^2 = .042, p = .001$			
Job Satisfaction	-.064	.131	-.030	.628	-.262	.078	-.219	.001
Block 5	$\Delta R^2 = .088, p = .001$				$\Delta R^2 = .001, p = .900$			
Morale	-.626	.116	-.398	.001	-.009	.069	-.010	.900
	$R^2 = .217$				$R^2 = .094$			

Note: The values for *b*, SE B, β , and *p* correspond to the models as a whole. The values in bold indicate statistical significance of at least $\alpha = .05$.

Challenges of From Face-to-Face Teaching to Online Tutoring: A Case Study

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Abstract

The paper reports on the results of the case study related to the implementation of online tutoring in one of the state universities in Turkey. The research is a qualitative study based on the free interview of the focus group of online tutors and ICT experts on their experiences and problems they faced during their first year of online tutoring to the university students. The problems identified were grouped in four clusters a) technical; b) managerial; c) instructional; and d) psychological. Based on the findings, a complex of solutions have been suggested and being implemented into practice in order to enhance the quality of online tutoring in the framework of the formal university education. The main purpose of the enhancements is to raise the online tutors' competences in ICT tools for online tutoring purposes, to reformat their teaching experience from the face-to-face mode of teaching to the specifics of online tutoring and communication mediated by appropriate ICT tools. Considering the results of the study we developed an outline of skills and competences required for an online tutor and formulated principles of effective online tutoring. The results of the case study implies that the online tutor's competences should include the areas of the pedagogy and methodology of online tutoring, strategies of online instruction, and managing appropriate ICT tools.

Keywords: face-to-face teaching, online tutoring, ICT-enhanced learning environments

Introduction

In the information era and rapid development of ICT tools, online education has become an important invention providing a wide range of possibilities for lifelong learning. Developments in telecommunication and computer technologies made designing online courses and establishing networked cultures much more affordable and manageable for educators at all levels of learning.

Together with the technological and educational advancements, and due to the growing competition among educational establishments, universities are urged to provide a larger variety of forms and methods of learning to meet the needs of technologically-enhanced society (Sekret, 2012; Sekret & Kommers, 2014). In this respect academicians and instructors are required to revise their professional competences in order to adjust their teaching practices to the conditions of ICT-enhanced learning environments.

One of the world-wide growing tendencies in education nowadays is the implementation of online learning in the contexts of university formal education. This process is accompanied with many problems and difficulties, and one of them is switching the university instructors from the mode of face-to-face teaching to ICT-mediated learning environment.

As it often happens, instructors experienced in face-to-face teaching have to switch to the mode of online tutoring and adjust their teaching strategies to the conditions of ICT-mediated learning environment. During this process they experience a huge variety of problems which affects their

performance, motivation to be involved in such kind of activities, and, consequently, the quality of online tutoring as a whole and students' learning outcomes.

Such problem was mentioned by Vlachopoulos (2008), when many instructors who are new to online teaching, without relevant background or experience of online pedagogy are asked to contribute to the development and delivery of online courses. In this situation one cannot but agree with Sheena O'Hare (2010) stating that "There is a real danger that these members of staff are being asked to run before they can walk without a clear picture of what the role looks like and whether it is very different from what they have previously experienced". As Tomei (2006) states, "online teachers have to be different from and more demanding than on-site teachers" which is conditioned by the specifics ICT-mediated learning environment (Tomei, 2006).

Referring to such problems the current study aims to analyse experience of instructors after their first year of teaching online in order to identify the problems and challenges they are facing, and to outline a complex of solutions to enhance their performance and a quality of teaching online.

Methodology of Online Tutoring

Nowadays a big amount of research and studies focus on the problems of online learning. The scope of the questions under concern range from the pure theoretical, defining pedagogy and methodology of online learning, to those, describing online practices and case studies.

Due to a variety of pedagogies and approaches applied, the concept of online learning turns to be a broad one including different forms of ICT-mediated. While most researchers define the concept as access to learning experiences via the use of some technology (Carliner, 2004; Gümüş & Okur, 2010; Regan et al., 2012) and as wholly online learning (Oblinger & Oblinger, 2005), others consider it as a new form of distance learning (Benson, 2002). Khan (2005, p.3) defined online learning as "an innovative approach for delivering a well-designed, learner-centered, interactive, and facilitated learning environment to anyone, any place, any time by utilizing the attributes and resources of various digital technologies along with other forms of learning materials suited for open, flexible, and distributed learning environments".

In the literature, online tutoring is often referred to as a process of teaching in an online, web based or virtual environment in which teachers and learners are separated by time and place (Denad, 2003; Flowers, 2007).

According to the definition brought by Cornelius and Higgison (2001), tutoring or moderating include "those aspects of a teacher's work which involve managing and 'animating' interactions with and among learners, especially with respect to their participation in networked learning activities".

As Vlsachopoulos (2008) and Sheena O'Hare (2011) notified, the role of online educator is defined in a wide range of ways including tutor, teacher, facilitator, promoter, manager, discussion leader, negotiator, and E-moderator. Despite the term given, the role and functions of the online tutor is complex and requires specific skills and competences. (Sheena O'Hare, 2011).

In the model described by Monguet & Ferruzca (2010) online tutors are defined as tutors-authors and content experts experienced in on-site teaching. The scope of their duties include planning tutoring activities to assure their presence at each one of them, guiding discussions on the topic

and answering questions related to contents, evaluating answers, detecting students' progress, communicating with students through messages on the forum or via email (Monguet, Ferruzca, 2010).

Online tutor has to operate the whole process of learning online. This task should be done systematically and based on the principles of online pedagogy. Methodology of online tutoring should consider context, subject and types of learning activities conducted by the online tutor. In order to do these activities, online tutor is required to possess specific skills and competences. According to Khan (2001); Marcelo et al. (2002), any tutor, counselor or mentor has to own a suit of skills and competences that will be extremely relevant for doing his/her job in the online environment.

Seoane, et al (2007), Guichon (2009) defined some specific issues of e-learning in lifelong learning contexts. Being related to the scope of activities performed by online tutors, they include competence in the subject matter, technological skills, methodological, didactical and psycho-pedagogical skills, communication skills, social skills and leadership, evaluation and quality skills.

It is stressed that the tutor should improvement a leadership position consisting on promoting collaborative working atmosphere inside a learning community (European Commission, 2005), which is possible to be in achieved through the introduction of the collaborative learning model.

To add to the aspects mentioned above, it is important to consider conducting knowledge assessment and evaluation online. Due to a variety of assessment techniques and lack of face-to-face interaction, great attention should be given to the successful design and implementation of student assessment in the online courses (Yukselturk & Curaoglu, 2010).

The technological aspect of online tutoring is important issue to consider. Thus, Hawkrigde & Wheeler (2010) notify that blogs, wikis and podcasts provide essential supplement to the established systems in online tutoring such as email, virtual learning environments (VLEs, such as Blackboard) and computer conferencing. Together with that they discuss possibilities of Second Life to meet students' needs for tutoring and specifics of interacting in such online environment (Hawkrigde & Wheeler, 2010).

The problems of enhancing the interactivity of online tutoring by implementing social media are raised in the recent studies by Salmon et al. (2015). According to the the authors' findings, although some participants of structured online learning benefit from social media by crediting it with networking and knowledge-sharing opportunities, others object or refuse to engage with social media, perceiving it as a waste of their time (Salmon et al., 2015).

Gray, Annabell, & Kennedy (2010) argue that university-utilised learning management systems (LMSs) and social media platforms both enable file sharing, collaboration and discussion although social media platforms tend to be more popular with students for peer-to-peer interactions (Davies et al. 2010, Veletsianos & Navarrete, 2012, Sekret, 2012, Sekret, Williams, 2013) due to their familiarity and flexibility (Salmon et al. 2015).

Considering results of the literature review and analysis of case studies focussing on the specifics of online tutoring, we assume that online tutoring is characterized by the following features:

- Methodology of online tutoring is based on the principles of constructivist and social-constructivist pedagogies.
- Main components of online tutoring include: a) adopting a specific pedagogy or an educational method, which conditions ways and strategies of the learning content delivery and providing social support for the learning group; b) organisation and coordination of supplying services of online tutoring; c) a coherent system of ICT tools with the manageable interface; d) technical support for the online tutoring system to function smoothly and to be adjusted to the learning purposes.
- Forms of providing online tutoring depend on the learning needs, content of learning, the scope of the topics under discussion, number and character of its participants. Therefore, there can be distinguished: a) many-to-one online tutoring; b) peer online tutoring; c) one-to-one tutoring; d) tutoring provided by automated tutoring systems; e) online tutoring as e-moderation for facilitating the mainstream learning; etc.
- Online tutoring can be conducted in synchronous and asynchronous modes, or combining both modes of communication and interaction.
- Alongside with delivering the learning content, effective online tutoring presupposes performing scaffolding, weaving, facilitating discussions, and providing feedback. Due to the specifics of the ICT-mediated learning environment and absence of possibilities for face-to-face contacts, the mentioned teaching processes, which are extremely essential for learning and being realised naturally in a traditional classroom, remain to be a problematic area for the online tutoring class. They require to be transformed and adapted to the conditions of online tutoring via appropriate ICT tools and communicative strategies.
- Online tutoring is conducted in most cases via virtual learning environments (VLE) or LMS involving also other ICT tools and social media for developing learning content (presentations, video, podcasts, etc) and facilitating communication in the learning group.

Methods and Procedures

The study was aimed to analyse one-year experience of implementing online tutoring in the framework of the formal university education at AIBU. The research is a qualitative study based on the free interview of the focus group of online tutors and ICT experts.

Due to the fact that it was the first experience of online tutoring for most of the university instructors, there was a concern about the ways how they were adjusting their face-to-face teaching styles and techniques to the conditions of online tutoring.

The question under discussion was: “What problems did you experience when teaching online?”.

The managerial staff of the online learning centre were asked to comment on their experience of arranging technical issues of online courses, and problems they had to settle together with the instructors. Also they shared their observations on the overall tendencies and dynamics on the part of the online tutors and students.

The instructors were sharing their own experience of teaching online courses, the problems they had to face, specifics of the students’ behaviours, strategies of learning and communication.

Focus Group

The focus group consisted of ICT experts responsible for managing the system of online tutoring and ICT supply, and the university instructors and academicians experienced in on-site lecturing and other teaching activities, such as developing learning materials, assessment and evaluation, etc. The overall number of the participants in the focus group was 28 persons, males in the age of 35 - 50 years old.

Specifics of the Online Tutoring System

In order to shed the light on the specifics of the online tutoring system of the institution under consideration it is essential to provide some details as for its functioning.

The system of the online learning applications was initially established in 2014, August. In order to support online education environment, an LMS was hired from a private company in Turkey. This institution is one of the leading companies on online education in Turkey, and creates LMSs and online course contents for private and governmental organizations.

After analysis and evaluation of both open source and commercial LMSs with a team consisting of experts in instructional technology department at the university and considering the university conditions such as budget, the number of students, teachers and information technology experts at the university, an agreement was made with the company and LMS was hired to enroll up to 10,000 students. The LMS was installed in a cloud computing environment and serviced by the company. Also, the web conferencing tool is purchased and it was installed into two server computers at the computing service of the university, integrated with the LMS and could be used by 2,000 users at the same time. The company ensured to respond to a failure in the LMS and the integration of LMS with the web conferencing tool.

The LMS is composed of several modules in order to help the application of learning and instruction in online learning environment. In this part, the modules of the LMS (Course content, Quiz, Assignment, File sharing, Web conferencing, User track, Announcement, Messaging, Discussion) and roles of users in the LMS are introduced.

Results and Their Discussion

The findings from the discussions and interviews were analysed and the problems identified were clustered in four categories: a) technical; b) managerial; c) instructional; and d) psychological (Table 1).

The identified points were admitted and agreed upon by all the participants of the focus group.

Analysis of the instructors' and ICT experts' feedbacks allowed to outline a complex of solutions for enhancing quality of online tutoring at the university level. Among them are:

- Providing intensive pre-training program on the specifics of online tutoring, differences between the face-to-face setting and ICT-mediated environment on strategies of teaching, communication and interaction. It should be done in an active, collaborative and project-based mode to form necessary skills and competences within a short period of time.
- Organizing workshops and trainings on ICT usage for different purposes of online tutoring.

- Providing orientation for the students before the online course. It should focus on regulations and requirements, codes of behavior, communication and interaction with the instructor and peers during online sessions and in the asynchronies mode of communication.
- Establishing teams of content developers, designers, evaluators, software developers, etc. to perform collaboratively at the design, delivery and evaluation of the online courses.
- Realizing continuous collecting data on the feedbacks from instructors and students on the online courses, learning contents and strategies, specifics of ICT tools functioning, teaching practices and their effects on the learning outcomes.
- Reflecting and reacting effectively on the problems appearing during the course delivery and afterwards to enhance the quality of online tutoring and learning outcomes.

Table 1. Problems of Switching From Face-to-Face Learning to Online Tutoring: Analysis of the Online Tutors' Reflections

Technical	Managerial	Instructional	Psychological
Internet connection	Ethical regulations (time, conditions, ways of communication and interaction, behavior within online course)	Organizing interactivity among the students during online session	Students' motivation to take online course - preference to face-to-face learning
Downloading/uploading materials	Students' attendance issues (free/obligatory)	Providing lectures and assuring active learning	Instructors' motivation to deliver online courses - preference to face-to-face teaching
Changing status of the participants, adjusting, switching on/off – time consuming and distracting from the content	Instructors' work overload (developing content, managing the course, checking assignments, quizzes, providing feedback to students, managing the class if it is oversized)	Assuring attendance and active participation of the learners in online session	Diversity of students; different groups require different approaches (educational levels, cultural background, ages, social status, etc)
Compatibility of LMS with other ICT tools (social media, free/non-free)	Lack of pre-training of the online instructors	Providing timely and effective evaluation (formative/summative)	Affective issues (attitudes toward online learning, teaches/students' anxiety, preoccupations, etc)
Lack of reliable connection between different parts of the campus and regional areas of the student's' location	Lack of pre-instruction of the students on the code of behavior and strategies of learning within online course	5. Regulations on the content and ways of its delivery	Psychomotor abilities to joint and follow the course (students with learning disabilities)
Insufficient technical supply (studio for video recording lectures for asynchronous mode of delivery, licensed software)	Need for knot-knit teams to be established (content developers, designers, evaluators, software developers, etc)	7. Necessity to develop own learning content because the purchased one does not meet the requirements and needs of the institution	Possibilities to consider students' learning styles
Compatibility of the university's technical abilities and students' technical capabilities/possibilities to joint and follow		8. How to develop content (tools, methods, forms of representation)	
		9. Course and teaching/learning quality assurance (consistency of the content, assignments, ways of evaluation)	

Based on the findings and their analysis we developed an outline of skills and competences required for an online tutor to perform effectively. They are as follows:

Pedagogy and Methodology of Online Tutoring

- know pedagogies and methodologies of online tutoring;
- be aware of differences of face-to-face and online teaching;
- be familiar with practices and trends of online tutoring, etc.

Online Instruction

- be competent and professional in the area of the subject taught;
- possess a repertoire of techniques of online tutoring within the following teaching activities: a) delivering the learning content online; b) establishing connections with the learners and among them; c) facilitating communication and discussions during the online delivery of learning; d) getting and providing meaningful feedback; e) monitoring the knowledge progress; f) knowledge assessment and evaluation;
- be knowledgeable and skillful as for providing a variety of e-tivities (online learning activities) appropriate for the learning content, needs, and purposes of online tutoring;
- know techniques of online scaffolding in a view of limitations of ICT-mediated learning environment;
- be able to weave different resources and data in the streamline of the learning;
- be flexible as for the learning content, learners needs, and ways of communication and interaction with the students;
- be open for new experience and competences in the professional area and in the area of online tutoring, etc

Managing ICT Tools

- be competent of ICT tools required for purposes of online learning;
- able to manage the main ICT tool aimed to provide online tutoring environment;
- know and be able to apply alternative ICT tools for different purposes of online tutoring;
- be able to evaluate effectiveness of other ICT tools and to implement them for the needs of online learners;
- be sensible on the balance of ICT tools in order to facilitate learning and communication and not to burden the learners and the course;
- know how to replace ICT tool with the other means or a way of teaching in a case of technical problems or faults of ICT tool functioning, etc

To sum up the results obtained from the literature review and the findings from the case study it is essential to state that effective online tutoring should be based on the following principles.

Independent Learning and Students' Autonomy

Online tutoring is called to foster students' independent learning. In this context, developing a student's autonomy is a principal phenomenon of online tutoring, which stands for specific learning conditions of online tutoring and aims of independent learning. In the situation of online tutoring, a learner's autonomy can be interpreted as a learner's ability to define their own learning goals and needs, being responsible for their learning in a sense of being able to regulate their determination to study, to continue learning and achieve the learning goals.

Collective Knowledge Construction

Together with the development of a learner's autonomy, online tutoring presupposes collective knowledge construction. The lecturer is no longer the only source of knowledge and information, but on the contrary, learners develop the knowledge and ideas through their interaction with different sources. For this purpose a tutor's ability to weave different data and views into one

stream of knowledge is of prime importance in order to facilitate learners' deeper understanding of the learning content and to develop their critical thinking when dealing with various information resources.

Transformative Learning

As far as the learning is no longer restricted by the traditional limits as for the content, ways of communication and sources of knowledge, it acquires new features of being transformative and flexible. It is essential for online tutors to demonstrate their students meaningful and logical connections between bulks of knowledge, experiences, information and data, in order to make knowledge and skills obtained in a course of learning be transformative and easily adjustable to the needs and situations of the learner's everyday life and professional tasks.

Establishing Communities of Practice

Online tutoring assumes collective knowledge construction, which occurs in specially established communities of practice. Such communities include learners enrolled in the course, their instructors, outside experts. They may involve broader circles of individuals and groups who are interested in the subject or having expertise in the subject area. The main aim is to provide socialisation for the learners, to organise discussions and communicate on the issues of the course. Such practices contribute to the students' deeper understanding of the course and its content, making learning transformative and flexible, sharing experiences, broadening professional and cultural visions.

Dialogical Learning

Collective knowledge construction and practicing within the learning communities occur via dialogical interaction. It entails equality in exchanging of information, sharing views, experiences and responsibilities, switching the roles from the learner to the tutor (as, for example, in peer online tutoring). As a result, learning tends to turn from the one way knowledge delivery to the spatial mode acquiring dialogical features.

Self-Reflection

In the context of online tutoring, self-reflection acquires special significance as it is the main moving factor for the learner to realise their learning, determine their learning aims, needs and, therefore, learning content. Self-reflection is also important for the online tutor in order to sense the streamline of the course, to introduce changes when it is required, tune the content and teaching strategies to the needs of the learners. Self-reflection is a main regulating tool for the success and efficiency of the online tutoring as a whole.

Conclusions

The aim of the paper was to reveal issues related online tutoring at the university level courses. The focus group was formed to discuss problems they experienced while teaching online. The findings from the discussions and interviews can be categorized into four clusters of problems: a) technical; b) managerial; c) educational; and d) psychological.

The *technical issues* include problems with internet connection, downloading/uploading materials, changing status of the participants, compatibility of LMS with other ICT tools, compatibility of the university's technical abilities and students' technical capabilities/possibilities to joint and follow, lack of sufficient technical support.

The *managerial issues* refer to the problems of ethical regulations, students' attendance and participation, instructors' work overload, lack of pre-training of the online instructors and students, establishing teams for elaborating, designing, implementing and evaluating an online course.

The *instructional problems* entail organizing interactivity among the students, conducting online lectures and assuring active learning, facilitating students' active participation during online sessions, providing fair and timely evaluation, developing the content and defining strategies of its delivery.

The *psychological issues* deal with students' and instructors' motivation, diversity of students' learning styles and psychomotor abilities, affective issues such as anxiety, attitudes, etc.

Based on the findings from the focus group discussion a complex of solutions was provided to the online instructors in order to enhance their competences and deal with the problems identified. They included: 1) intensive pre-training program on the specifics of online tutoring, 2) organizing workshops and trainings on ICT tools usage for different purposes of online tutoring, 3) providing pre-course orientation for the students focusing on regulations and requirements, 4) establishing teams of content developers, designers, evaluators, software developers, etc. 5) collecting data on a constant base concerning the feedbacks from instructors and students, 6). reflecting on the problems in order to enhance the quality of online tutoring and learning outcomes.

Analysis of the data and implementation of the solutions mentioned above brought to developing an outline of skills and competences required for effective and efficient online tutoring. They are categorized into three areas: 1) pedagogy and methodology of online tutoring, 2) online instruction, 3) managing ICT tools.

Therefore, the effective online tutoring can be defined as the mode of learning which is based on such principles as 1) providing independent learning and students' autonomy; b) collective knowledge construction, c) transformative learning; d) establishing communities of practice; e) dialogical learning; and f) self-reflection.

The findings of the case study and suggestions derived from the research are consistent with the studies conducted by Sheena O'Hare (2011), pointing to the problems encountered when switching university instructors from the face-to-face teaching to the online learning environment. Those findings provide evidences that university instructors are required to develop specific competences and abilities in order to conduct online tutoring effectively, which was also stated in the studies by Khan (2005), Monguet & Ferruzca (2010).

The limitations of the study are conditioned the specifics and regulations of the venue where the research was conducted. The solutions and suggestions may be reconsidered while implementing online tutoring in other institutions according to their conditions and regulations.

The perspectives of the research are viewed in the development of tools aimed to evaluate online tutors' competences, and studying effective teaching strategies in ICT-mediated learning environments.

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Building Bridges and Patching Gaps: The Honey Badger Intervention Lab to Help High School Seniors Graduate From a Texas High School

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Abstract

In a climate where EXIT-level testing determines a student's status as a graduate or simply a completer, public education faces even more challenges in educating students. This study chronicles an intervention lab for high school seniors, who had never previously passed a state standardized test, and as a result were in danger of not receiving their diploma despite having earned the requisite credits, as well as back-graded students, who had been in high school four years without earning the required number of credits to be designated as seniors. Teachers were carefully recruited and selected to work with 200 students. Students self-selected their teachers for the lab. The results of the intervention were: 189 students passed all of their remaining EXIT-level tests to classify for graduation with a diploma. Many of those students earned "Commended" and "Distinguished" ratings. This study also revealed some best practices for educators working with these students.

Keywords: achievement gap, skill gaps and skill deficits, standardized testing, college and career readiness, at-risk students, high school graduation, exit-level state standardized testing

Introduction

The problem of back-graded students and seniors who will "complete" without "graduating" is a growing problem in U.S. schools (Valencia, 2015). The presence of such students in schools puts the campus at risk for being low-rated and leaves it vulnerable to loss of accreditation and state interference. Test results show students who fail these mandated large-scale tests are likely to be disproportionately poor and African-American students (Hess and Brigham, 2000). Economically-disadvantaged and African-American students have suffered severe consequences for not performing well on mandated assessments. Schools deny diplomas in disproportionate numbers to poor students and students of color. Students of color and of poverty are much more likely to drop out of school than to receive a diploma of little value, and more likely to not attend college (Hess and Brigham, 2000).

Most dropouts/pushouts are members of historically disadvantaged groups. Students from sizeable urban districts and those from communities of economic hardship are more likely to dropout. That amounts to roughly six million students throughout the nation (Rumberger, 2011; National Center for Education Statistics, 2015). Evidence of this failure to serve students is illustrated in GED statistics, which draw 700,000 students every year (National Center for Education Statistics, 2015). To clarify, that's 700,000 people who gave up on the system's ability to reach and teach them annually. But the dropout's path from K-12 to GED isn't a linear one. Rather, the GED's average test taker is typically poor and 26 years old. Thus, the average test taker has spent some time flailing about, trying to figure out their next step. Additionally, they have to somehow gain the skills needed to pass the test on their own time and resources. This is no small task. And there is a

large population of adults who aren't successful in this pursuit. Forty million adults in the United States do not have a high school education or equivalency (Rumberger, 2011).

Some urban schools and districts with high levels of poverty and large numbers of ethnic, cultural, and linguistically diverse students have succeeded in raising achievement (Rothstein, 2004; Skrla et al., 2000; Ragland et al., 1999). They have done so by designing instruction and assessment around standards, not tests; by devoting increased time to reading and math instruction; investing in high-quality teacher professional development; involving parents in their school improvement efforts; and designing quality summer programs (Skrla et al., 2000; Ragland et al., 1999; Grissmer et al., 1998). These gains in achievement seem to suggest that schools do make a difference in reducing the achievement gap by delivering better services to the students who need them. Central to the school reform discourse is efforts to bring all students up to the same academic skill level in order to close that gap. However, this task is a complex one.

Literature Review

A synthesis of numerous research studies conducted over the past 50 years establish that 16 factors related to life experiences and conditions that are correlated with cognitive development and academic achievement. Contributing to the achievement gap are really three foci of factors: aspects of the home and school connection, school factors, and circumstances present both before and beyond school (Barton, & Coley, 2009/2010; Barton, & Coley, 2009; Barton, 2007; Barton & Coley, 2007; Barton, 2006; Barton, 2004; Barton, 2003). When we talk about aspects of the home and school connection, we're really referring to parent participation (Barton, & Coley, 2009; Barton, 2003). This is a two-way street where schools are reaching out to parents and keeping them in the loop, and parents are trying to support the efforts of the school. It's critical that when parents are trying to be involved, the school shows receptivity and avoids speaking in technical jargon, which can be intimidating to most parents (Barton, & Coley, 2009).

School factors refer to things such as class size, level of rigor in curriculum, quality of preparation of teachers, experience level of teacher, teacher turnover, teacher absence, availability of instructional technology, and a student's sense of safety and fear at school (Barton, & Coley, 2009; Barton, 2003). Most commonly, we look at those school factors that are related to instruction and to the learning environment. These typically include educator pedagogy, quality of leadership, and even professional development (Barton, & Coley, 2009). These are the instructional infrastructure. You also want to investigate the culture of the school, which includes factors such as the commitment, of teachers and staff, the academic expectations, and school security (Barton, & Coley, 2009).

These factors are highly correlated to the achievement gap. "The fact remains that achievement gaps in the life and school experience of students of color and students of disadvantaged backgrounds all correlate with school achievement and they mirror the achievement gap in schools" (Barton, & Coley, 2009).

When we talk about aspects of the home and school connection, we're really referring to parent participation (Barton, & Coley, 2009; Barton, 2003). This is a two-way street where schools are reaching out to parents and keeping them in the loop, and parents are trying to support the efforts of the school. It's critical that when parents are trying to be involved, the school shows receptivity and avoids speaking in technical jargon, which can be intimidating to most parents (Barton, & Coley, 2009). According to Valencia (1997), when we think through the lens of deficit-thinking,

we look to the student when affixing blame for the gap. In other words, we assume “that students who fail in school do so because of alleged internal deficiencies (such as cognitive and/or motivational limitations)” (Valencia, 1997). This trend leads to the tendency to regard students of economic disadvantage and students of color, and their families as principally to blame for their own school failure (Valencia, 2015; Valencia, 2010; Valencia & Suzuki, 2001; Valencia, 1997).

Theoretical Framework

The theoretical framework guiding this study was adopted from Edmonds, (1979a; 1979b) effective school correlates and the Normed-Opportunity Paradigm (Walker & Cormier, 2014). The effective school correlates are the result of inquiry into school-based factors determining success for all students. This research emerged in response to Coleman’s (1966) assertion that socio-economics and family background were the major determinants of student success. In that same tradition, the Normed-Opportunity Paradigm holds that at-risk students bring with them unique skillsets which can and must be recognized, valued, and harnessed for student success.

There are seven correlates of effective schools are (Lezotte, & Snyder, 2011; Edmonds, 1980; Edmonds, 1979a; Edmonds, 1982; Edmonds, Comer, Billingsley, 1973; Edmonds & Frederickson, 1979; & Levine & Lezotte, 1990; Lezotte, 1991): Safe and Orderly Environment; Climate of High Expectations for Success; Instructional Leadership; Clear and Focused Mission; Opportunity to Learn and Student Time on Task; Frequent Monitoring of Student Progress; Home-School Relations. For the purposes of this study we chose three of the correlates Climate of High Expectations for Success; Opportunity to Learn and Student Time on Task; and Frequent Monitoring of Student Progress as the theoretical framework. Specifically, the researcher describes the philosophy of the teachers when working with students in the intervention program and describes the climate of high expectations for success; opportunity to learn and student time on task; and frequent monitoring of student progress The study examined the teachers’ ability to build relationships, rapport, and how they were able to effectively re-teach, remediate, accelerate, and enrich students who were not on grade level as well as who had not passed any standardized tests in high school.

The Normed-Opportunity Paradigm is a unique paradigm utilized and internalized among educators whose students of color and/or poverty showed no achievement gap. Rather than coming from a deficit perspective or expecting assimilation from their students of color and poverty, the outlook and approach of these educators positioned non-dominant group students as distinctive rather deficient. In fact, coming from this perspective, the educators recognized that while non-dominant students may be lacking in some typical student behaviors and skills, they bring other skills with them which can be channeled and transferred into academic success. The practices the educators used to help non-dominant students to success included: sharing student culture; allowing students to lead; discerning hidden talents; and refraining from moral judgments. For this pilot intervention, teachers who operated under the Normed-Opportunity Paradigm were selected to work with students.

In order to accomplish these research goals, this study focused on three research questions:

- Among students who have not had success on the exit-level TAKS tests, can working small groups help them pass the standardized assessment?

- How do teachers working in small groups with students who have not had success on the exit-level TAKS tests help students pass the standardized assessment? What practices and attitudes must be employed?
- What strategies and conditions must be present for students who have not had success on the exit-level TAKS tests to pass the standardized assessment?

Methods

In order to accomplish the goals of this study and answer the research questions, a qualitative methodology was considered to be appropriate by the researcher. Merriam (1998) suggests that qualitative research is based on the contention that reality is constructed by the interactions of individuals with their social environment. Therefore, the emphasis of qualitative research is an understanding of the meaning that individuals have constructed from their experiences (Creswell, 1998). This methodology gives voice to the lived experiences of the participants. The researcher, interviews, questionnaires, surveys, personal observations, and written documents provided additional data for this study. This methodology provides the means to explore the interactions between the teachers and their students. The methodology provided the means to explore the interactions between the teachers and the students in the intervention program and their impact on student achievement.

The intervention took place on a single campus within the district because the campus administration secured a grant from the district's foundation. Another grant from Renaissance Learning provided a research consultant, a technology consultant, and a site license for six programs to develop an intervention lab for students who met two criteria: (1) seniors who had not passed their EXIT-level standardized state tests, and (2) students who should be seniors in age after four years in high school, but were considered back-graded because they had not achieved the 18 credit hours required for senior status. Due to the fact that 250 students in the high school (of the 2,484 students) classified under these two conditions, the high school was going to be labeled *Academically Unacceptable* under the Texas Accountability system. The lowest possible rating. Any school or district with such ranking will be required to submit a plan for corrective action, and the Texas Education Agency (TEA) may assign a monitor to the school or district to assist it in improving its rating. The only way to avoid that fact was to ensure these students graduated on time.

For this intervention, twelve teachers, whose personal career demonstrated an ability to successfully work with at-risk kids, were identified and recruited to be part of the lab. Those teachers were pinpointed through both their standardized test scores by demography, records regarding previous work with at-risk students, and their response to a survey on deficit-thinking. Students were identified based upon their status as never having previously passed a state standardized tests. During benchmark tests, students and teachers got to know one another. After this period of rapport-building and getting acquainted, students self-selected the specific teachers they wanted to work with. This granted the students a level of autonomy they had never before experienced. Typically, we assign students to teachers' classes without their input. And many campuses do not permit teacher requests, or class transfers at student request. This was a key piece to the success of this intervention: students were not the passive recipients of an intervention. Students were active collaborators helping to construct their own success. This also created an environment of shared responsibility for learning in a way they had never previously experienced.

Another key factor to success was the decision regarding lab design. The intervention lab was open four days a week from 4:30-8:00 on Mondays through Thursdays as well as two sessions on Saturdays 9:00-11:00 and 11:00-1:00. This allowed students to work in groups of three or one-on-one with teachers. This intervention continued for twenty weeks.

A typical day in the lab began with the student taking an assessment using the Renaissance Learning software in reading or math, depending on upon what students chose that day. They would take a 7-10 question pre-assessment quiz on a topic. After the system scored their quiz, they started to work on concepts the quiz revealed they did not possess mastery. They could watch a video on the concept, then seek out their preferred teacher to either provide targeted instruction, a pep talk, or an ear for them to vent to regarding their frustration about not performing well on their pre-assessment.

The programs provided by Renaissance Learning were:

- Accelerated Reader (AR)—is a powerful tool for monitoring and managing independent reading practice. AR utilizes the ATOS readability formula—a verified measure of quantitative text complexity for the Common Core State Standards. Each book with an AR Quiz has an ATOS book level and an interest level—a qualitative measure of text complexity.
- Accelerated Math (AM) Live—helps teachers personalize math practice, differentiate instruction, monitor progress, and make data-driven decisions to guide each student to success. Students can now see and answer their math problems online using computers, laptops, or tablets—or use paper and pencil—the choice is yours.
- STAR Reading Enterprise—assessments include new skills-based test items, and new in-depth reports for screening, instructional planning, progress monitoring, standards benchmarking, as well as a Core Progress learning progression and Student Growth Percentile measurements.
- STAR Math Enterprise—assessments include new skills-based test items, and new in-depth reports for screening, instructional planning, progress monitoring, standards benchmarking, as well as a Core Progress learning progression and Student Growth Percentile measurements.
- STAR Early Literacy Enterprise—is the breakthrough computer-adaptive diagnostic assessment that helps you identify your students’ command of key early literacy and numeracy reading skills quickly, accurately, and easily.
- MathFacts in a Flash—involves practice for grades 1-6 and intervention for grades 3-12. It gives students valuable practice on their addition, subtraction, multiplication, division, fractions, decimals, and percentages. The goal is to achieve “automaticity”—the ability to recall math facts instantly, accurately, and effortlessly.

Data Sources

This study involved only one suburban urban school district: Swiftwater Independent School District, one of the 100 largest districts in the United States. The district serves 45,739 students: 30% Latino, 10% African-American, 45% Caucasian, and 12% Asian/Pacific Islander, and 4% Bi-racial. More than 30% of the district is low socioeconomic status. More than 8% of the students are English Language Learners (ELL), and 32% of the district is considered at-risk (TEA, 2010).

Swifterwater ISD is home to six International Baccalaureate (IB) World schools: three elementary, one middle, and two high schools.

Lafayette Dunbar high school serves 2,484 students and is one of the two IB world high schools in the district. The demographics of Lafayette Dunbar high school are 15% African-American, 43% Latino, 5% Asian/Pacific Islander, 4% Bi-racial, .7% Native American, and 33% Caucasian. The campus is 38% low socioeconomic status. More than 4% of the students are English Language Learners (ELL), and 35% of the campus is considered at-risk. The campus has an 18% mobility rate. The principal of Lafayette Dunbar is a Latino male; 3% of the teachers are African-American, 79% are Caucasian, 14% are Latino, 2% Asian/Pacific Islander, and 4% Bi-racial. Twenty-one percent of the teachers at Lafayette Dunbar are male and 79% of the teachers are female. Five percent of the teachers are first year teachers. Twenty-nine percent of the teachers have 1-5 years' experience. Twenty-four percent of the teachers have 6-10 years' experience. Twenty-seven percent of the teachers have 11-20 years' experience, and 15% have over 20 years' experience. The campus earned an accountability rating of Academically Acceptable for the 2008-2009 school year. The campus earned Gold Performance Acknowledgements: Texas Success Initiative (TSI) ELA Comparable Improvement: Mathematics (TEA, 2010).

Data Collection

Data collection was accomplished through interviews, surveys, observation, and record review. The teachers were interviewed on three separate occasions. The researcher used open-ended and probing questions to provide the participants the opportunity to fully express themselves. These interviews were audio-taped with two tape recorders and notes were taken during each interview. The responses of the teachers are coded to properly put their attitudes, values, beliefs, behaviors, and instructional strategies in the appropriate context of the effective school correlates. A journal was utilized to record all relevant events discovered during the study. The students were surveyed to determine their feelings about school and standardized testing.

Results

At the end of the twenty weeks, the lab had a 95% pass rate. Of the 200 students involved in the intervention lab, 189 passed all of their remaining EXIT-level tests. One hundred and twenty of those students earned a "Commended" rating. Fifty of the students who had not previously passed their math and science state standardized tests received a "Distinguished" rating, and were offered partial scholarships from local community colleges if they pursued math or science. These results were accomplished both through the structure of the lab, and the specific practices employed within the lab.

Discussion

Failure Is NOT an Option

There was a culture of high expectations created in the Honey Badgers intervention lab. But more importantly, there was an environment of "we won't let you fail" created. Rather than the students feeling as though they were alone in whatever academic outcomes they experienced, there was a sense of "we are all in this together." The students felt that their teachers in this lab were personally invested in their success, and that a student's failure would be experienced as a failure of the intervention. There was no disconnection between the students' experience and the teachers'

experience. For students who have previously experienced failure and negative academic outcomes, feeling as though they have a collaborator and someone who was equally invested in their success is powerful.

One of the teachers, a twenty-eight year old Latina, named Ms. Green, who worked with our students on math and science, discusses how she tried to create high expectations:

I believe all kids can learn if the curriculum and teaching methods are individualized to each student's needs and supplemented with teachers that have a capacity to identify students' strengths. This would include taking into account psychosocial, environment, family structure and stressors, socioeconomic, medical, biological, poverty and other factors affecting student's learning capacity. That is one of the reasons why I am working in the lab.

She went on to state, "Knowing that I am helping young men and women prepare themselves to be better prepared and successful parents and still have opportunities to succeed in the future." Many of the students in Ms. Green's group talked about how she got to know them first, how she asked questions about what they like and disliked about school, and let them guide the instruction. Mrs. Green had just become a social worker.

Another teacher, first-year high school Caucasian speech teacher, Ms. Black, who set high expectations by:

I truly believe that all kids/students can learn. It goes back to what I believe in teaching. All students learn differently. If I have a student who is not picking up on the material well, I make sure that I can re-teach the material; add additional activities and so on. Many parents/teachers believe that there is a student that just can't learn. I believe that every student can learn if the topic/lesson is interesting and we tie it to everyday lessons. Of course, there are students who do not try in the classroom. As teachers, if we can get students to try, and understand that all students learn differently, then all kids can learn.

In spite of her being a first year teacher new to working with at-risk students, many of her students made comments like "Aha, I get it!" and "Are you going to be here?" questions, so she felt like she and her colleagues were starting to make an impact. Three of her students started regularly staying until 7:30.

Students as Partners in Learning

Allowing the students to self-select their teachers was a purposeful decision. Rapport between teacher and student was held in high regard. In a typical public school setting, the student has little choice in their learning environment. They are assigned a teacher, and regardless of their opinion of and feelings about that teacher, they are rarely allowed to choose another teacher. We also do not allow students or parents to request teachers when choosing their classes, claiming it is a logistical nightmare. However, the reality is that the level of affinity between teacher and student can and does have an impact on learning. If a rapport fails to develop between teacher and student, learning is compromised. Yet we continue to enact and uphold school policies clearly designed for administrator convenience (i.e. not allowing students to request teachers or to change teachers). Permitting students to change teachers in cases where the student genuinely feels distressed by the lack of rapport, relationship, or respect is a simple change campuses could enact to impact student success.

Additionally, the students in this particular inquiry have experienced academic frustration in the past. Thus, being given the autonomy to *choose* their teacher rather than being *assigned* to a teacher spoke volumes to them about their role in their own learning. This immediately communicated the idea that “this is not your typical learning experience.” As a result, students had more trust, belief, and investment in the process. They felt more like partners in their own learning as opposed to being a passive receptor of lessons. It was a decision that empowered our students in a way nothing else could have.

There was some trial and error to students successfully selecting a teacher. One of our students, an eighteen year-old Latina, Vanessa, who had never passed a standardized test while in high school, talked about how she worked with three teachers in the lab before she connected with Mrs. Dance, a Caucasian, fifty year-old veteran elementary reading teacher, who has taught 25 years. Vanessa explains the connection:

I wasn't sure that the lab would work for me because I couldn't find anyone to make me understand anything. Then Mrs. Dance saw me in the corner angry, so she came over and started talking to me. She was like my abuela. Then I asked her a couple of questions about math and she answered and I started to understand.

She went on to say that she would have liked high school a lot more if she could have chosen her own teachers. She also believes that would have been more success and not be on the “stupid kids list” if she could have selected her own teachers. Other students spoke about instances of attempting to have a teacher changed during their high school career only to be told that it was impossible. The students recalled leaving the counselor's office feeling defeated and discouraged. The common refrain was “it's like they don't *care* about whether we learn or how we feel.” Considering the fact that as adults we often encounter individuals with whom we struggle to communicate or understand, and in those scenarios we extricate ourselves when possible, and avoid the person when release is impossible, it is curious that we are so invested in forcing students to remain in classrooms where they are uncomfortable or uneasy.

Opportunity to Learn

In our lab, we did not “teach to the test.” The temptation to do so is very strong in an intervention program. After all, the primary goal is to make sure the student passes the test. So many teachers will design instruction around the test itself. We approached our task quite differently. We focused on teaching skills. To clarify, we taught *above* the test. We taught beyond it. We aimed for the students to walk out of the program with skills exceeding the minimum skills assessed by the state standardized test. As a result, our students performed above merely passing the test. Thus, instead of falling prey to simply aiming for passing the test, we focused on one of our other goals: moving on to college. The lead teacher in the lab, Ms. Bird, an African American, special education teacher said:

In addition to teaching the content to the students for the exam we were also teaching skills to assist students in college. Many of our students were not thinking about going to college, but as we started getting results of the standardized tests they began to rethink it. Especially the kids who found out they could get scholarship money from the state to attend the local community college.

One of our most committed students who started to attend the lab every day, Sonya, a 17 year-old Latina senior, is able to better explain this:

I really didn't want to go the lab when it was first announced because I thought it would be like TAKS camps we always did where we answered test questions and did writing prompts. We never did any of those things in the lab. I *really* learned how to do math and improve my reading skills. I really began to understand that I passed all of my tests with the highest rating. I don't really understand it [the ratings scale], but I know it means I got scholarship to go to college. I am the first to graduate from high school and get to go to college.

We felt like it was important for the lab to teach students skills that they would use later in life so if the students didn't immediately go to college after high school they could use those skills on their job. Therefore, it was important that our teachers focused on skill gaps and skill deficits to prepare students instead of teaching to the test. This accomplished some important things. Firstly, it gave students hope. While dominant group members often take hope for granted, hope is a critical element to learning (Barnum, et al.; 1998; Juntunen & Wettersten, 2006; Westburg & Martin, 2003). For non-dominant students, hope may be in short supply. And there are often few, if any, success stories of people they identify with personally to help them develop hope. "For many youth at risk, schools may be the most important vehicle for instilling human hope and optimism and overcoming negative influences" (Gibson & Barr, 2015). When students began conceiving of themselves as people who may be capable of more than "just passing," they begin to have hope for the future. That hope supports us through struggle and makes it worth it.

Concentrated Student Time-on-Task

The lab was set up to serve students ten hours a week. Students who successful logged between 6.5 to 7 hours of the ten hours available in the lab weekly. Students who did not pass their EXIT-level tests spent only 4.2 to 4.5 hours weekly in the lab. Thus, the threshold for success in this setting was logging a minimum of 6.5 hours per week (65% of the available time weekly). All of the students who were unsuccessful on their state standardized tests logged below that number weekly. Thus, time-on-task played a large role here. While this was a pilot study and further investigation is warranted, this inquiry seems to suggest that a minimum of 6.5 hours a week are necessary to impact student success in an intervention situation. The two teachers who ran the lab, Ms. Bird and Mrs. Dance, observed as well as charted that students who attended the lab for the minimum of 6.5 hours experienced success on their lessons, which motivated them. As they began to have success the majority of them started to attend more often and every day.

To ensure students could make the most of their time in the lab, routines were established early on. Students entered the lab with purpose and clarity regarding what tasks they would focus on while there. Mrs. Dance noted:

I asked them to do five questions at a time and then have us check/reteach, so their little remaining time before TAKS would be well spent. Everyone worked on either science or math. I also wrote up posters of instructions for the students telling them what to do (and how to do it) when they enter--1st sign in, 2nd, 3rd, etc. And posted them by the sign in sheet. Having the directions and immediately giving them the options worked to get them settled and within 5 minutes everyone was quietly working. At that point Ms. Bird went around and checked for contracts. Everyone was taken care of, so we were able to check answers for students and reteach as necessary.

As we looked back at the 11 students who didn't pass their exams, Mrs. Dance and Ms. Bird noticed that these students didn't consistently come to the lab and nor did they log many hours a

week. Those eleven charts looked very different than the other 189 student charts of students, who were successful.

Frequent Self-Monitoring of Student Progress

The use of the Renaissance Learning software allowed students to track their progress in the system. They could login in to Accelerated Reader (AR) or Accelerated Math (AM) to see their pre-assessments and post-assessments that showed how they performed on the assignments for that concept. Their history of data was available at the click of a mouse. Teachers began to notice that the students were becoming more confident as a result of being able to login and track their progress. Students were reporting to teachers that in the regular classroom they had to wait for teachers to grade assignments, tests or quizzes, yet in the intervention lab all of their data was a few clicks away. They began to wish their classrooms were like the intervention lab. Again, we can see how the students themselves are empowered in their own learning. Rather than being dependent upon the teacher to monitor their progress, and to trust her to intervene if they needed it, they had the autonomy to monitor themselves and make whatever adjustments needed or ask for more help. This ability puts the student in the driver's seat of their knowledge.

The best thing about using the Renaissance Learning software was not only the teacher's ability to track all 200 students' progress, but the student's ability to track their own grades. Jamal was an all-state football player with numerous scholarship offers that he would not be able to take advantage of because he wouldn't be a high school graduate named stated:

I wish I had the ability [in my regular classes] to track my progress like I do in the lab. Between my computer file and touching base with my instructor frequently in the lab I was always learning and always knew what I didn't know and needed to do better. I would have better grades if my real classes worked like the lab.

Our most at-risk students stated that they liked the immediate feedback, and the ability to log-in to the system to check their progress on their learning objectives, TAKS objectives, and literacy and numeracy objectives. Many students asked why their teachers in their classes weren't like the teachers in the lab. They often commented if school was like the "lab more kids would pass and not be forced to drop out."

Conclusion

This intervention lab attempted the ambitious task of preparing 200 back-graded seniors and students who had previously not passed their EXIT-level state standardized tests to ensure they were eligible to graduate in twenty weeks' time. While this was no small undertaking, the lab was ultimately incredibly successful. With a 95% pass rate on the state standardized test with students, who had previously not passed their state assessments, this intervention exceeded the expectations of administration.

The success of this lab depended upon both the instructional software utilized and hiring such a well-suited staff. The software helped customize instruction for each student. And the immediate feedback proved to be a critical element of student success in the lab. Without teachers who could connect with the students, the lab would have failed. It was critical to find teachers whose view of students was not from a deficit lens. The teachers for this lab were hand-selected for this intervention. Given the economic climate of schools today, many teachers wanted to participate

in the lab since it was an opportunity for extra pay. We staffed the lab with a dozen teachers, who we carefully selected from a pool of 50. The lab's success rests squarely with that careful process of ensuring our staff were educators who employ the Normed-Opportunity Paradigm (Walker & Cormier, 2014). The Normed-Opportunity Paradigm is a critical standard for teachers to be successful with marginalized students. That outlook permitted the creation of a climate and practices that fostered success.

Another important aspect of the Normed-Opportunity Paradigm was that our at-risk students guided and led their own learning while working in conjunction with their teachers. They got to self-select their teachers, which empowered them. They were partners in their learning, rather than simply consumers of instruction. The key point is that only these hand-picked teachers were comfortable letting their students direct their own learning while continuing to develop and build their relationship. The teachers also taught above the test, with an eye toward college—not just “passing the test.” This instilled hope in these students and belief in themselves. A teacher's faith in a student's ability is infectious. Students catch it, too. The teachers' high expectations coupled with a small experience of success gave students hope. That hope helped motivate students to continue on and persevere. Students who did not have a small moment of success had difficulty investing in the process. Their lack of hope manifested itself in their reluctance to utilize the lab enough hours to impact their success. We believe that this model can be effective in narrowing the achievement gap with low-income students as well as students of color.

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Please Talk to Me: The Key to Educators Engaging With Families of Different Cultures

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Abstract

Parents and teachers from different cultures are both concerned about parental participation in the classroom, with the parents' concern being focused on how to participate in a helpful manner due to language barriers and the teacher's concern on how to be sensitive yet communicate effectively. The challenges are not insurmountable, and with some attention to these challenges by both the teacher and the families, success is possible. Most importantly, the children will benefit from the teacher and the parents working together to provide the best possible support for their learning

Keywords: family, culture, trust, partnership, learning

Introduction

The paper offers information on the components for increasing parental involvement and collaboration between teacher and families from different cultures. The purpose of the paper is not to blame teachers for their lack of involvement of families. Conversely, the goal is to suggest ways that teachers may not realize that will help them work with families from a different culture. Powerful communication and family involvement can result. The paper helps how educators work to enlist the participation of these families in schools by focusing on their own cultures and backgrounds and discusses prominence of cultural influences in parental involvement related to their children's education. Culture can pose a hurdle to parental involvement when families believe educators lack a proper understanding of children's culture. Educators' awareness and appreciation of cultural differences are reflected in their interactions with parents. This research examines the importance of connecting with parents, the need for purposeful conferences, and raising the bridge of understanding, to engage support, and involvement. Since family involvement has been well documented as a contributing factor to improving students' academic performance, it is essential that this connection between teachers and family from different cultures be made.

Parents and teachers from different cultures are both concerned about parental participation in the classroom, with the parents' concern being focused on how to participate in a helpful manner due to language barriers and the teachers concern on how to be sensitive yet communicate effectively. Misinterpretation of communication or misunderstanding of others' beliefs and values may cause serious problems. It is important, especially for teachers and professionals who are working with a diverse group of parents and children, to be active listeners, cooperative learners, and open communicators. The cultures and languages of parents that differ from that of the dominant culture, however, are often ignored, denigrated, or at best, treated superficially. Consequently, the families from diverse cultural and linguistic backgrounds may view interactions with education professionals as challenging. Cheatham and Santos (2011) discuss culture-based understanding and behaviors related to time and communication that may present challenges to teachers trying to involve families in their children's education. Teachers can accomplish this communication with parents by considering time and communication orientations—their own and the family's. The

parents moved from personal concerns regarding the importance and pervasiveness of culture in their lives and the crucial role they hold in their children's learning to broader concerns of schooling through a deeper understanding of how learning takes place in classrooms. Opening doors for parents, pulling out chairs, greeting them, and smiling are all important gestures that demonstrate positive nonverbal communication. Educators can better serve students who come from diverse cultural backgrounds by understanding the different cultural values of these students and their families (De Gaetano, 2007).

It is important for educators to engage with families from different cultures to be more involved in the education of their children. Some questions worth considering is how might we counteract practices that encourage school professionals to resist, ignore, and avoid these families' opinions, perspectives, desires, and knowledge about their children's education? In what ways might these parents themselves inform the process of increasing involvement and establishing partnerships?

Learning

Due to knowledge gaps between academic success and family involvement as well as the racial/ethnic differences there are some mixed findings about which parental characteristics are predictive of higher levels of parental involvement. There are distinct differences in parental involvement across the schooling process by race/ethnicity and poverty status. Banerjee et al., (2011) found that minority children were less likely than their majority counterparts to have come from homes with adequate learning stimulation.

The teacher may be ineffective in getting the desired reaction from parents if they do not include information on how grades are calculated and what concepts the children have had a hard time learning (Fantuzzo, 2013). This type of outreach by the teacher may also enable parents to actively engage with school. Homework, in particular, is an area where misunderstandings between families and the school are likely to occur. The dominant attitude toward homework found in the educational and political discourse in the Italian media emphasizes the burden of having the family too involved in homework (Kremer & Fatigante, 2015).

The literature also supports that racial/ethnic socialization is related to academic outcomes (Lowenhaus, 2014). However, the majority of these studies are cross-sectional and therefore do not examine the impact of racial/ethnic socialization practices on children's performance over time. For example, in a study of African American parents, reports of racism awareness messages to children were positively related to parental involvement at home but were negatively related to parents' school involvement (Banerjee et al., 2011). There is also evidence of a positive relationship between parental involvement and racial/ethnic socialization, which was found in preschool-aged children. Although there is literature suggesting that certain types of racial/ethnic socialization are related to parental involvement, more research is needed in this area. In particular, research that examines the combined impact of racial/ethnic socialization and parental involvement in education on children's cognitive outcomes is lacking (Banerjee et al., 2011).

A way to encourage parents from different cultures to be more active in the schooling process may be through a focus on their cultures and the realization of its importance in learning as well as through dialogues about the realities of their lives. One approach to involve culturally diverse parents in their children's schooling is through a conscious emphasis on their values, experiences, and way of life.

Research studies have identified barriers to minority and low-income family involvement in their children's schooling—barriers that schools can help overcome. These barriers include contextual factors such as time constraints, child care needs, transportation problems, language differences and cultural beliefs about the role of families in schooling. Families' lack of knowledge and understanding of U.S. educational processes; and exclusion and discrimination issues present another significant challenge (De Gaetano, 2007).

Effective communication is the key to connecting with parents and is particularly important when an educator and parents are from different cultures. An educator who communicates effectively with parents of their own or different cultures promote parental involvement and increase the likelihood of academic success for each child. Many difficulties in teacher/family interactions can be linked to expressions of culture-based characteristics, such as parents' respect for and comfort level with teachers as experts or families' and teachers' different approaches to problem-solving (Cheatham & Santos, 2011). Other cultural differences can also be considered for examples homework and food.

Importantly, teachers can change these challenging interactions to more successfully collaborate with families from culturally diverse backgrounds. Effective teacher/family communication and productive interactions with children and families from backgrounds culturally and linguistically different from their own supports children's are development and learning throughout their education. Other theorists also argue for the importance of teachers and educators actively listening to each other to gain an understanding of the different systems that affect the child (Eberly et al., 2007).

When administrators and educators are willing to address culture challenges, parents will engage in school activities. Creating a welcoming climate, promoting effective communication, and raising culture awareness are great strategies for removing cultural challenges. Family engagement appears to be a crucial mechanism by which parents of an ethnic minority may improve the academic achievement of their children. The school activities and materials that incorporate a focus on the family from different cultures are highly motivating to students.

If high academic achievement for all students is a goal, then achievement motivation theory must move beyond a cultural universalism stance to the recognition that cultural values influence students' social and academic goals. Rather than focusing only on students as the source of cultural difference, it would be wise to turn the lens from the individual to the institution to understand the ways school culture can support achievement motivation among all students (Boethel, 2003). The cultural variability one sees in orientation to achievement parallels cultural differences in what counts as school success. Cultures that socialize their children to put relatively greater emphasis on the group than the individual also often tend to have notions of success that integrate the social and moral dimensions with cognitive and academic dimensions of development. Social goals can best be understood in students' sociocultural contexts, as reflecting families' and communities' implicit validation of particular developmental pathways (Eberly et al., 2010). By bridging cultural communication, the values of culture, supported by cooperation and a general orientation to help others, were fundamental to students' social goals and to what would motivate them to achieve in school.

Emphasizing relationships with families more than paperwork and exchanging information, for example, engaging families in genuine conversations about their lives, families, and children. Educators must understand some of the different culture-based perceptions and behaviors that may

cause misunderstanding between educators and families from culturally diverse backgrounds. Contacting on learning culture-based orientations is another way that teachers can be both understood and respond to families (Eberly et al., 2007). Ultimately, effective teacher/family communication and collaboration support children's development and learning now and throughout their education.

The school activities and materials that incorporate a focus on the family from different cultures are highly motivating to students. Language and cultural differences, as well as differences in educational attainment that separate families and school staff, can make communication and family participation in school activities difficult. For example, U.S. Department of Education, (1997) found that parents who do not speak English at home are less likely to participate in school-based activities, and more likely to participate in fewer activities over the course of the school. Educators and families have to explore some activities for these families to be more involved in their children school.

Family Culture

The concept of culture has been defined in various ways: as a total way of life including ways of perceiving and behaving, a system of knowledge that includes beliefs, values, and ways of behaving that are transmitted to individuals and groups by others (Lahman & Park, 2004). The purpose of cultural approaches to schooling is to promote equity and social justice in the schooling process.

The primary transmitter of culture in schools must be included in ways that are respectful, helpful, and equitable to students and the schools. Scholars today recognize that culture is influenced by variables such as historical and social contexts, geographic location, gender, age, and generation, as well as ethnicity, cultural community, and race (Eberly, Joshi, & Konzal, 2007).

Lahman and Park, (2004) found that families from diverse backgrounds may view interactions with education professionals as challenging. Many difficulties in teacher-family interactions can be linked to expressions of culture-based characteristics, such as parents' respect for and comfort level with teachers as experts, or families' and teachers' different approaches to problem-solving (Cheatham & Santos, 2011). Other cultural differences should be considered. Teachers can improve these challenging interactions by collaborating with families. Factors like occupation, education, income, personality, and personal experiences play a role in one's beliefs, values, and behavior (Cheatham & Santos, 2011).

The educators can struggle to understand this intricate construct in the context of their classrooms especially with a large multiethnic population; they are challenged daily with building relationships across cultural boundaries. Close relationships between families and educators are built on mutual trust and respect. Developing such a relationship is difficult under any circumstances; it is even more problematic to establish when parents and teachers come from different cultural backgrounds. However, open, honest, and reciprocal cultural exchanges can take place when educators assume their professional responsibility to reach out to parents in thoughtful and respectful ways.

When educators are faced with the challenge of working with families from cultures different from their own, teachers must work especially hard to avoid misunderstandings based on cultural differences. Food can be a potential area for misunderstanding, for example, there are two types

of food in Muslim culture, haram (forbidden) and halal (permissible). Muslims do not eat pork products, or any food that contains pork-based gelatin, and alcohol. Muslims eat only food containing vegetable monoglycerides or foods which are classified as Kosher by the Orthodox Union, and seafood. (S. Mohammad, personal communication, May 17, 2016).

Listening to parents is a crucial element in any attempt to improve home/school relations as it can make schools aware of the families of their pupils and their communities. There is no simple answer and teachers, educators, and families need to work together to find better ways to educate children in a culturally responsive way. It is also important that everyone has the knowledge to contribute to this ongoing process.

Open communication, trust, high expectations, and non-judgmental exchanges of cultural values, beliefs, and practices are as important for effective communication with parents as they are for effective classroom curriculum and interactions. Parent/teacher communication is very important, and there are some barriers for such communication, especially as it relates to cross-cultural communication and translation of cultural understanding into practice that assures open parent/teacher communication and culturally responsive instructional practices. In order to have effective communication with parents, it becomes the school's responsibility to help build bridges between the cultures of the children, their families, and other communities by respecting their diversity. However, many teachers often have a limited understanding of the families' cultural pathways and do not know how to build these bridges in their classrooms (De Gaetano, 2007).

In addition, the argument is extended to focus on family/school relationships. To do this, teachers must consider and be open to accepting the cultural framework of families different from their own to establish open, frank, and ongoing communication with them. Therefore, it becomes the school's responsibility to help build bridges between the cultures of the children, their families, and other communities by respecting their diversity (Eberly, Joshi & Galen, 2010).

Educators can better serve students from diverse cultural backgrounds by understanding the differing cultural values of these students and their families. Misinterpretation of communication or misunderstanding of others' beliefs and values may cause serious problems. It is important, especially for teachers and professionals who are working with a diverse group of parents and children, to be active listeners, cooperative learners, and open communicators. As we try to understand perspectives and values of parents from diverse cultures, we believe that we will be able to contribute to our multicultural society by using ourselves as multicultural teachers and researchers to increase understandings of children and parents in different cultures (Peel, 1995).

Changing the knowledge, thinking, and practice of teachers related to how cultural communities' ethnic theories influence practice, the transition from knowledge into practice is difficult and requires time. In effect, in planning the program, more time needs to be spent helping participants confront and reflect on the new knowledge they have gained about cultural ethno theories and how it challenges their own beliefs and prejudices (Huntsinger & Jose, 2009).

Including all cultures in school-related events, celebrating different cultures, and displaying culturally diverse student work throughout the school are helpful forms of celebrating culture. Training all school personnel to interact positively with parents from diverse cultures may result in increased student achievement (Malone, 2015). School-based family engagement and strong home/school connections are protective factors for ethnic minority and low-income students. A

difficult school context, poor teacher-caregiver relationships, and lack of social support predict less caregiver engagement in school.

While increased awareness of parents' backgrounds and viewpoints may increase the likelihood of conferences resulting in positive outcomes, educators who employ certain communication skills have an even greater likelihood of success. The use of anti-biased conferencing strategies will help educators structure an atmosphere of mutual respect between themselves and the parents of all students, including parents from different cultures (Peel, 1995).

Possibilities

It would be helpful to design workshops to provide parents with information and ideas about how to help students at home with homework and other curriculum-related activities. Workshop topics should be based on parents' needs and ideas to encourage the parents to ask questions, to give their opinions, and to help educators think through how best to address their role in the involvement. Educators must consciously and walk a fine line between imposing their ideas about what they thought was needed and what the parents wanted and needed (De Gaetano, 2007).

Another possibility would be an evening of celebration with small groups of families and teachers where each person had a chance to talk about what they hold dear in their lives. The intimacy of this coming together can create a powerful bond between everyone. The most important benefit is a deeper understanding of each other and ultimately understanding what everyone hopes for their child.

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Promoting Inclusive Online Learning Communities in University-Based Programs: Considerations for Educational Leadership

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Abstract

Fostering inclusive learning communities can be challenging for online educators of adult learners. The purpose of this paper is to offer for consideration a conceptualized framework derived from the literature for promoting inclusive postsecondary learning communities in a global society. To ensure culturally responsive practices for a diverse society, postsecondary faculty and administrators are proactive about critically reflecting on their own professional praxes relating to adult learning. This conceptually based paper synthesizes current pedagogies and practices with traditional adult learning theories to offer new understandings for those who lead and teach within university-based programs that prepare educators and educational leaders.

Keywords: online learning, adult learning, inclusive learning communities, educator preparation programs, culturally responsive practices

Introduction

Faculty and administrators who work in university-based educator preparation programs model civic responsibility and a global perspective for aspiring K-12 public school teachers and leaders. Building and maintaining inclusive learning communities within a diverse and global society can be challenging for online educators of adult learners. Excellence in teaching and leading is not extemporaneous, but rather a progression of formal preparation, on-the-job experience, reflection, and continued professional development. Candidates enrolled in educator preparation programs seek the assistance of university faculty and administrators as role models for facilitating positive interactions with others and advancing skills and dispositions for leading, teaching, and learning in a global society.

To meet the needs of adult learners in the 21st century, postsecondary instructors reflect on their own practices and beliefs about teaching and learning relationships—including social and emotional constructs, culture, and motivation for learning. Vella (2002) described praxis as “doing with built-in reflection” (p. 115). Improvement of professional praxis in teaching and leading must be planned, intentional, and supported. The purpose of this conceptually based paper is to provide an integrative review of literature (Callahan, 2010; Toracco, 2005, 2016) and a conceptualized framework that blends knowledge about traditional adult learning theories, pedagogies, and culturally responsive practices for creating inclusive learning communities in an online program of educational leadership. This paper may promote deeper understanding for advancing teaching and leading praxes in a global society.

University faculty who work in online educational leadership programs seek continuously to evaluate and prioritize usefulness of curriculum content while simultaneously meeting the demands inherent to teaching online courses. Such duties include managing and applying new technologies, facilitating online discussions, and conducting appropriate assessment of student

learning outcomes. Faculty and administrators who work in programs that prepare educational leaders focus on providing a quality curriculum consistent with meeting requirements for state certification and national accreditation in the area of educational leadership.

Changes related to educational improvement include the widespread initiative to adopt K-12 Common Core State Standards (CCSS, 2018) and the federally legislated Every Student Succeeds Act (ESSA) (U.S. Department of Education, 2010), which replaced the No Child Left Behind Act (NCLB) (U.S. Department of Education, 2001). Those who work in formal programs of leadership preparation additionally focus on the Professional Standards for Educational Leaders (PSEL) adopted by the National Policy Board for Educational Administration (NPBEA, n.d.) and on the Council for the Accreditation of Educator Preparation (CAEP, 2015).

Introduction of Common Core State Standards (CCSS), federally legislated Every Student Succeeds Act (ESSA), and Professional Standards for Educational Leadership (PSEL) bring new opportunities for educators to evaluate approaches in leading, teaching, and learning—including technology enhancements, interdisciplinary applications, and re-envisioned accountability for inclusive communities of care and support. The integrative literature review and framework in this paper provides a lens for those who work in educator preparation programs and others interested in co-constructing inclusive learning communities.

Literature Review and Framework

Derived from the extensive body of literature on adult learning, principles cited in this paper include theories of motivation (Grow, 1991; Hersey & Blanchard, 1988; Maslow, 1954, 1970) and transformative learning (Mezirow, 1991, 2000). Culturally responsive practices (Bottiani, Larson, Debnam, Bischoff, & Bradshaw, 2017; Gay, 2002, 2010; Ladson-Billings, 1992, 1994, 1995, 2009) for teaching and leading are additionally recognized as essential for re-envisioning education to meet the demands of a culturally diverse society. In addition to traditional theories relating to motivation and transformative learning, topics central to this review and framework include: (1) Increasing awareness of nontraditional learners, social and emotional constructs, and deficit thinking; (2) exploring practices and pedagogies capable of advancing adult learning; and (3) considering approaches for leadership praxis in a global society.

Traditional Theories Relating to Motivation and Transformative Learning

Motivation for learning varies from individual to individual—regardless of age. Maslow's hierarchy of needs (1954, 1970) is a consideration for motivating adult learners as lifelong learners, spurred by a creative and meaningful journey toward self-actualization. Grow's (1991) staged self-directed learning model (SSDL) uses Hersey and Blanchard's (1988) theory of situational leadership as a foundation to describe a continuum for learning. Hersey and Blanchard (1988) recommended the supervisor adjust his or her behavior for relationship and task orientation to better accommodate the maturity level of the employee. With respect to Grow's (1991) model for application of self-directed learning (SDL), teachers of adults assess each student's level of maturity or capacity as a self-directed learner and adjust instruction accordingly to better accommodate students' needs.

Hersey and Blanchard (1988) and Grow (1991) conceptualized models for situational leadership and learning, and Maslow (1954, 1970) developed the hierarchy of needs theory during the pre- and early-Internet eras from the 1950s to the 1990s. Maslow's (1954, 1970) hierarchy of needs

includes the following five levels: (1) basic physiological needs, (2) safety and security, (3) love and belonging, (4) self-esteem, and (5) self-actualization. Applying Maslow's hierarchy of needs theory to contemporary virtual learning communities, adult learners who have access to the Internet and social media may already have their basic needs met (i.e. food, water, shelter, safety, and security). Social media may provide opportunities for adult learners to get their social psychological needs met (i.e. seeking relationships and building self-esteem), indicated by the middle levels of Maslow's five-tier model. The highest level of Maslow's hierarchy involves motivation for satisfying the need to achieve one's fullest potential—self-actualization.

Online courses allow students time to process new information and reflect on their responses, which may support experiential learning (Kolb, 1984), transformative learning (Mezirow, 1991, 2000) and profound learning (Kroth, 2016). In a study using Facebook as a learning tool (Churcher, Downs, & Tewksbury, 2014), findings showed that “Facebook postings and comments provided students with more explicit ownership of the examples used, and topics discussed, in class” (p. 40). Researchers added that wiki-based interactions “allowed students to debate, correct and work in a collaborative environment to scaffold information while expanding their zones of proximal development” (pp. 43-44). While students in the study were motivated to learn from each other and participate in online discussions, cultivating a virtual environment that supports student motivation capable of influencing authentic engagement (Saeed & Zyngier, 2012) can be challenging for online educators. Facilitators of adult learning can promote transformative learning by intentionally using approaches that employ multiple means of engagement, honor diversity inside and outside the learning community, and encourage contemplation and self-reflection about one's own beliefs in online and face-to-face courses.

Increasing Awareness of Nontraditional Learners, Social and Emotional Constructs, and Deficit Thinking

Reflecting on one's own beliefs about nontraditional adult learners (Chen, 2016), social and emotional constructs (Hu & Smith, 2011; Smith & Hu, 2013; Merriam & Bierema, 2014; Uchida, Norasakkunkit, & Kitayama, 2004), and deficit thinking (Abdi, 2016; Sharma, 2016; Skrla & Scheurich, 2001; Valencia, 1997) may not only inform educators' and students' worldviews, but also provide additional insights for developing culturally responsive praxes for teaching, leading, and learning.

Nontraditional Adult Learners

A student typically described as a nontraditional adult learner (NAL) is 25 years of age and older (Chen, 2017). Additionally, a student who is 25 years of age and younger with “characteristics indicative of adult responsibilities” (p. 1) is categorized as a nontraditional adult learner (Chen, 2017). Representing approximately 38.2% of the USA postsecondary population (National Center for Education Statistics, 2009, cited in Chen), the nontraditional adult learner (NAL) is often a neglected component at the postsecondary level (Chen, 2017). Chen added, “The assumption in this perspective is that learning is an ancillary activity implying less urgency or need” (p. 2). In any case, postsecondary institutions have increased efforts enrolling traditional students from the following populations: (1) domestic students from diverse socioeconomic backgrounds, and (2) international students (Chen, 2017). Whether students are traditional or nontraditional, implementing necessary supports for all students is critical because adult learning is an essential function to keep pace with a rapidly changing global society.

Educational inequities frequently center on technology and the lack of skills or other resources needed to navigate the World Wide Web. The Washington Post (Taylor, 2016) reported 47 percent of the entire world population uses the Internet. Accessibility to the Internet and necessary development of 21st century skills (Saavedra & Opfer, 2012) may help adults be more confident and engaged as learners. Inaccessibility to the Internet means no access to sites that facilitate formal and informal learning—and no access to virtual relationships, which may provide a sense of belonging for some adult learners.

In addition to uncertainties about acquiring the technological skills needed for online navigation, some adults may be hesitant to further their education because of limited language or reading abilities. In a review of studies conducted at the postsecondary level, Perin (2013) surmised that there remains “much to be learned about the literacy skills of underprepared students” (p. 1). The Huffington Post (2013, 2014) reported that 14% of adults in the USA—32 million Americans—are non-readers. Statistics showed an additional 21% of adults in the USA are reading below a 5th grade level. It is unclear whether these statistics included individuals with limited language abilities or those who speak English as a second language.

Limited language or reading abilities may not only affect students’ capacity as self-directed learners, but may also inhibit them from seeking formal or informal learning opportunities altogether. As an example, students who are new to higher education may experience, for the first time, reading scholarly publications or navigating new technologies. Convenient and affordable access to remedial education (Wellman & Vandal, 2011) may help adult students build necessary skills and find more meaning in their learning experiences. Chen (2017, p. 2) asserted, “Evaluating college-readiness of students, while needed, runs the risk of blaming students when they do not fit the academic culture.” Bias, whether institutional or personal, impedes progress on the path to a socially just education. Implementing necessary supports for all students is critical because continuous, lifelong learning is essential to keep pace with a rapidly changing global society.

Social and Emotional Constructs

Exploring social and emotional constructs such as collectivism versus individualism may provide further insights for teaching adults in a global society. Merriam and Bierema (2014) stressed, “An ongoing lament as globalization takes hold and classrooms are increasingly multicultural, diverse, and multilingual is that learning cultures often clash, particularly between East and West” (p. 244). Developing a global perspective requires awareness of personal assumptions and critical self-reflection (Mezirow, 2000), and adjusting one’s own praxis for teaching, learning, and leading. As an example, Uchida, Norasakkunkit, and Kitayama (2004) posited individuals from East Asian cultures are more collaborative or collectivist in their approaches to social activities and learning, and individuals from European-American backgrounds are more independent.

Understanding how social and emotional constructs vary from East to West—or from culture to culture (Hu & Smith, 2011; Smith & Hu, 2013; Uchida, Norasakkunkit, & Kitayama, 2004) may help educators make meaning of various forces that have potential to complicate relationships and routine interactions within diverse learning communities. Smith and Hu (2013, p. 88) credited Confucian philosophy as having influenced collectivism in Chinese classrooms where “discipline and conformity that reflect teacher domination and authority” is stressed. Researchers (Smith & Hu) added that American classrooms focusing more on inquiry, practical application, and democratic values are modeled after Dewey’s (1916, 1938) progressivist approach to education. Smith and Hu (2013) conceptualized a blended framework of Eastern and Western philosophies

for “a holistic view of 21st century teaching and learning” (p. 89). Findings in the study confirmed elements of their blended framework were “closely associated with the 21st century skills” (p. 102). Smith and Hu combined Eastern values of “responsibility, commitment, industry, and persistence” (p. 102) and Western values of “individuality, self-confidence, and democratic education” (p. 102) into one framework for further consideration and exploration.

Although educators applying a blended framework for teaching and learning may necessitate adoption of a new paradigm, positive attributes of Eastern and Western cultures may effectively support teaching and learning of 21st century skills and a global perspective in education. Science, Technology, Engineering and Math (STEM) education is a critical issue for educational administrators because the national Common Core State Standards (CCSS) initiative raises expectations for student achievement, and 21st century skills may help educators meet increased standards within “the new accountability system” (Wong, 2013, p. 412).

As instructional leaders, university faculty, university administrators, and K-12 public school administrators stay current on initiatives that affect teachers of Career Technical Education (CTE), Science, Technology, Engineering, and Mathematics (STEM) and Common Core State Standards (CCSS) so they can provide appropriate inservice opportunities for professional development (Kitchel, Tenuto, & Cannon, 2013; Sturko & Gregson, 2009). Students enrolled in educational leadership programs are prepared to provide professional development and additional supports needed to help ensure rigorous implementation and sustainability of these programs.

Deficit Thinking

Inaccurate assumptions about individuals whose cultures or backgrounds are different from our own are described in the literature as deficit thinking (Skrla & Scheurich, 2001; Valencia, 1997). Having conducted research on families from Somalia and students from other places of origin, Abdi (2016) advocated ending the paradigm of deficit thinking. Regarding negative effects of deficit thinking, Abdi (2016) added, “Everyday classroom interactions can have powerful meaning, imparting intended and unintended lessons about who belongs and who doesn’t” (para. 6). Deficit thinking is harmful to students’ well-being (Sharma, 2016) and is counterproductive to inclusive learning communities where all students can experience a sense of belonging.

Paradigmatic assumptions or deficit thinking by some can have detrimental and lasting effects on individuals who seek acceptance as equal contributors within communities for learning and beyond. Increasing awareness of culturally diverse social constructs and adopting culturally responsive practices (Bottiani et al., 2017; Gay, 2002, 2010; Ladson-Billings, 1992, 1994, 1995, 2009) within universities and K-12 schools may eliminate harmful incidents of deficit thinking. University and school personnel are encouraged to continue supporting and researching programs at all levels of education that promote culturally responsive practices.

Exploring Practices and Pedagogies Capable of Advancing Adult Learning

Exploring and applying culturally responsive practices, frameworks for overall course design, and new pedagogies are vital to strengthening adult learning. Culturally responsive practices for teaching and leading (Bottiani et al., 2017; Gay, 2010; Ladson-Billings, 1992, 1995; Santamaria & Santamaria, 2016) are essential to re-envisioning adult education for meeting the demands of a culturally diverse society. Universal Design for Learning (UDL) focuses on providing students with multiple means of representation, multiple means of engagement, and multiple opportunities

for expression (Meyer, Rose, & Gordon, 2014; Rogers-Shaw, Carr-Chellman, & Choi, 2017). This flexibility appeals to a diverse population, including traditional and nontraditional adult learners. Additional pedagogies for adult learning found in the literature include film-based assignments (Olson, Autry, & Moe, 2016); biographical prompts (Lohr & Haley, 2017); service learning (Early & Lasker, 2017); museum learning (Kawalilak & Groen, 2016); problem based learning (Roopashree, 2014); and use of teaching case studies (i.e. Tenuto, Gardiner, & Yamamoto, 2015, 2016; Fleig, 2016; Horsford, 2016; Theoharis & Causton, 2016).

Culturally Responsive Practices

Although conducted at the K-12 level, Ladson-Billings' (2009) research on culturally relevant teaching may provide insights for teachers of adult learners. In a study of successful culturally relevant pedagogy at one elementary school, Ladson-Billings (2009) identified two qualities the otherwise diverse group of female teachers had in common. The first quality was experience in the field—all of the women in the study had been teaching for at least 12 years—and the second quality was “that each of these teachers could point to a transformative moment in their lives that forced them to reassess the way they did their work” (p. viii).

In a systematic review of empirical studies about inservice interventions intended to promote culturally responsive practices (CRP), researchers (Bottiani, Larson, Debnam, Bischoff, & Bradshaw, 2017) credited Ladson-Billings (1994, 1995) and Gay (2002, 2010) for their work in culturally relevant and culturally responsive teaching respectively. Of 179 peer-reviewed articles screened for consideration, 10 articles met the criteria established by researchers (Bottiani et al.). According to Bottiani et al., the 10 eligible articles included school-level or staff interventions to improve culturally responsive practices and reported findings from an empirical research study. Findings from the review suggested, “that empirical research examining the impact of interventions to improve CRP is in a relatively nascent stage, with the majority of studies (six of 10) being published in the past 7 years” (Bottiani et al., p. 13). The incipient nature of the literature on CRP is not indicative of the efforts invested by educators for developing and implementing culturally responsive practices in USA universities and schools.

Teaching Case Studies, Problem Based Learning, and Service Learning

Continuing education and contemplation on one's own teaching and leading praxis at all levels, K-12 through higher education, is a way to promote equity for students despite ever-changing technological, social, economic, and political issues. Major pedagogies used in educational leadership programs found in the literature include “multimedia methods, cases, simulations, technology, action research, and reflection” (Crow & Whiteman, 2016, p. 130). Educational leadership faculty can encourage more engaged learning and critical self-reflection by incorporating relevant teaching case studies, problem based learning, and service learning into course curriculum. Content-specific teaching case studies (i.e. Tenuto, Gardiner, & Yamamoto, 2015, 2016; Fleig, 2016; Horsford, 2016; Theoharis & Causton, 2016) provide opportunities for students to reflect on their own experiences in relation to scenarios presented.

Roopashree (2014) defined problem based learning as an instructional approach that “advocates experience-based education and which helps the students to learn by solving problems and reflecting on their experiences, thereby helping students to become active learners by placing them in real-world problems which makes students responsible for their learning” (p. 9). Responding to the need for empirical studies about online learning, Early and Lasker (2017) conducted a study

about integrating service learning in an online undergraduate health course. Early and Lasker (2017) noted some of the drawbacks of online learning as “learners feeling that they are learning in isolation, mundane assignments lacking in the experiential, and students feeling a lack of instructor presence and community online” (p. 1). Online activities that require problem based learning and service learning may facilitate increased collaboration and anticipation of how one might deal with actual situations encountered.

Considering Approaches for Leadership Praxis in a Global Society

In a national study about reforming programs that prepare educational leaders, researchers (Murphy, Moorman, & McCarthy, 2008) found evidence suggesting university-based programs have historically operated within a culture of autonomy. Murphy et al. added, “The culture of autonomy is incompatible with the kind of work needed to develop programs” (p. 2196). Recommendations for reform included replacing the autonomous culture with a culture of community, collaboration, and integration. Noting that program reform initiatives require technical and adaptive change, Murphy, Moorman and McCarthy (2008) further explained, “Technical change demands the commitment of resources that are in short supply—time, people, money, favors, and all the opportunity costs of other benefits foregone. Adaptive change asks of people that they give up even more important things—familiar ways, loyalties to everyone somehow connected to the status quo, and identity” (p. 2195).

Implementing change within a culture of autonomy or a culture that resists change poses a challenge to those who are leading change. The model for ethical leadership praxis in a global society (Tenuto & Gardiner, 2017) and other leadership approaches offered for consideration in this paper may promote a culture of community and collaboration within university-based programs. Educational leadership faculty and administrators can make a difference by cultivating democratic and ethical leadership praxes, which are important aspects of educational leadership preparation and practice.

Renewed approaches for leading in a global society to replace outdated, top-down leadership models are extant in the literature. Pedagogically centered leadership (English, Papa, Mullen, & Creighton, 2012), caring leadership (Louis, Murphy, & Smylie, 2016), inclusive leadership (Theoharis & Scanlan, 2015), and cultivating democratic professional practice in education (Tenuto, 2014, 2015) are some of the approaches recommended for promoting caring and inclusive communities in education. A conceptualized model for ethical leadership with a global perspective (Tenuto & Gardiner, 2017) is offered in this paper as further consideration for leading education in a rapidly changing global society. The model for ethical leadership praxis in a global society (Tenuto & Gardiner, 2017) may support culturally responsive practices in K-12 schools (Bottiani et al., 2017) and higher education (Santamaria & Santamaria, 2016), Universal Design for Learning (Meyer, Rose, & Gordon, 2016), and other approaches that essentially prepare all learners to positively interact, work, and live in a diverse society.

Applying principles of ethical leadership praxis in a global society (Tenuto & Gardiner, 2017) may not only facilitate a curriculum aligned to state and national standards, but further the preparation of educators—by expanding capacity for self-reflection, modeling civic responsibility, and encouraging others to adopt culturally responsive practices for teaching and leading. The model for ethical leadership praxis in a global society (ELPGS) includes the following four interactive dimensions:

- Understanding social justice theory and leadership theory;
- Applying state, national and professional ethical / legal standards;
- Engaging in ethical leadership practice and role-modeling for culturally responsive leadership (CRL); and
- Employing personal leadership ethics and core values as a cyclical process of self-reflection and decision making.

The conceptualized model provides occasion for discourse and building coalition to bring new meaning to the role of education and educational leadership. An original contribution for building leadership praxis centered on ethical leadership, the model encourages leaders to reflect on their own practices and interactions with others. Equally important are the contributions of social justice, cultural understandings, and reflection on core values and practice embodied in the model as a foundational vision for inclusive practices in education and beyond.

Methods

Researchers conduct literature reviews for multiple purposes, which involves using a variety of formats for different audiences (Toracco, 2016). Suitable for readers with limited time constraints, a condensed review or a “mini-review” of literature (Pautasso, 2013, para. 10, “Rule 4”) provides formal and critical analysis of extant research and synthesis of current knowledge to bring new understandings to a focused issue. This paper provides an integrative literature review (Callahan, 2010; Toracco, 2005, 2016) and conceptualized framework as consideration for advancing teaching and leading praxis in an educational leadership program. A mini-review (Pautasso, 2013) that blends traditional foundations of adult learning with current approaches for teaching and leading may help faculty and administrators acquire additional knowledge for building and supporting inclusive learning communities within university-based programs of preparation.

Searches of relevant literature yielded a selection of published works about motivation, transformative learning theories, and culturally responsive practices—together with related information about teaching adults. Topics found in the literature were reviewed, categorized into themes, and incorporated into a conceptualized framework. Pautasso’s (2013) ten recommended rules for conducting a literature review served as guidelines in the process. Examples of Pautasso’s rules deemed as most helpful were: (1) Choose a well-defined issue; (2) be critical and consistent; and (3) find a logical structure. Strategies for conducting the review included scanning references for additional sources and preparing annotated bibliographies of relevant publications.

As a full-time, tenure-line faculty, the author of this paper has successfully taught more than 40 online graduate-level classes in an accredited program of educational leadership at a public research university. In addition to assisting candidates in building necessary knowledge in policy and procedure, instructors stay current with adult pedagogies in both face-to-face and online venues while meeting requirements for state certification, national accreditation, and national standards for educational leaders. Managing information at the cutting edge of newly adopted legislation, education reform initiatives, technology, and research-based practices is a fundamental requirement of a successful program.

Discussion

No matter the level in education, students rely on their administrators and instructors to transcend negative perceptions and inaccurate assumptions about them and their communities, and to help

them navigate the educational system. The school leader, as a positive influence in establishing a trusting and collaborative school environment, should not be underestimated. Those who work in programs of educator preparation have an opportunity to foster dispositions of inclusion and care for students who are shaping their teaching and leading philosophies.

Conversely, school environments with limited awareness or support for cultural responsiveness can create conditions that negatively impact students' dispositions or worldviews. Deficit thinking can have serious ethical implications on students (Sharma, 2016), so early detection and deconstruction of negative assumptions is an imperative for establishing inclusive communities that promote responsible citizenship and culturally responsive practices. Deficit thinking is not only harmful to the well-being of learners, it is counterintuitive to establishing and maintaining communities where all individuals feel welcome—where all are treated with dignity, kindness, and respect.

Top-down models for leadership preparation that have dominated the field of education are outdated. More recent models of leadership promote a culture of community and collaboration (Murphy, Moorman, & McCarthy, 2008), are inclusive (Theoharis & Scanlan, 2015), and pedagogically centered (English, Papa, Mullen, & Creighton, 2012). Conceptualized models that promote democratic principles of shared leadership (Tenuto, 2014, 2015) and ethical leadership with a global perspective (Tenuto & Gardiner, 2017) may provide additional supports.

Faculty and administrators in university-based programs have a role in not only preparing students as future educators and educational leaders, but also in supporting traditional and nontraditional adult learners from diverse backgrounds. This role includes promoting culturally responsive praxes and taking necessary steps to address the needs of individuals as current students and as future employees in a global work environment. To ensure caring and inclusive communities within a complex global society, educators of adult students must be proactive about critically reflecting on their own professional praxes and relationships with others.

Conclusions

Educational leaders and teachers share responsibility for developing culturally responsive praxes, implementing culturally responsive curriculum, and modeling positive behaviors for responsible citizenship. Guiding students toward self-direction is complex (Grow, 1994; Tennant, 1992), but faculty can support adult learners to be more engaged and self-directed by using student-centered pedagogies and practices within inclusive online communities. This necessitates a focus on the overall course design, which includes using pedagogies that support development of leadership skills and dispositions, assessing student understanding of course content, and promoting positive online interactions within an inclusive learning community. An area where future work remains is building collaboration within university-based programs of teacher preparation and leadership preparation for developing a more seamless curriculum consistent with state certification, national accreditation, and professional standards focusing on cultural responsiveness and care.

While ample research exists about faculty who work in educational leadership programs and candidates who have successfully completed educational leadership programs (Crow & Whiteman, 2016), less is known about students upon acceptance into the program. Empirical studies investigating students' skills, competencies, and dispositions are recommended. A review of the literature also revealed few empirical studies focusing on pedagogical theory in preparation programs for educational leaders (Crow & Whiteman, 2016). Additional quantitative and

qualitative studies on the use of pedagogies for preparing educational leaders would make a relevant addition to the literature. Researchers (Bottiani, Larson, Debnam, Bischoff, & Bradshaw, 2017) also recommended conducting rigorous empirical studies that explore challenges associated with measuring and operationalizing CRP at multiple levels of education.

Socially just leaders understand social and emotional constructs in relation to teaching and learning, confront issues of deficit thinking, and treat others with dignity and respect regardless of race, origin, culture, gender, gender identification, sexual orientation, age, ability, or other differences. As role models of responsible citizenship within a larger community, faculty and administrators help all learners—traditional or nontraditional—navigate the education system and find their niche in university-based programs of preparation. A reasonable focus for advancing teaching and leading is university faculty and administrators promoting and modeling inclusive learning communities for aspiring educational leaders—who will be responsible for supporting culturally responsive programs and practices in their schools.

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A Qualitative Analysis of Student Learning Using a Decision-Tree Tool

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Abstract

This qualitative research study was designed to investigate and improve the learning and application of counseling theories by Pupil Personnel Services Credential (PPSC) graduate candidates who will be employed as school counselors in K-12 public education settings. The study evaluated the influence of three collaborative learning techniques in the learning process. Each learning technique was examined to determine its efficacious nature in the overall learning process according to the perceptions of the graduate candidates. This analysis demonstrated the use of collaborative learning techniques as beneficial to the learning process for graduate candidate participants.

Keywords: collaborative learning techniques, decision-tree, adult learning

Introduction

Theories undergird all professional preparation of K-12 counselors; however, preparing candidates to use cognitive, affective, and behavioral theories in practice is a difficult task. A pedagogical approach that is growing increasingly more popular is that of collaborative learning. According to Barkley, Cross & Major (2005) collaborative learning is defined as learning through group work rather than by working alone. Cabrera, Crissman, Bernal, Nora, Terenzini, & Pascarella (2002) identifies cooperative learning as an effective pedagogical strategy that promotes a variety of positive cognitive, affective and social outcomes. Jones (2014) explained that collaborative learning is an important pedagogy that is particularly meaningful for graduate students who are often adults returning to college. This study focuses on the use of Barkley et al. (2005) Collaborative Learning Techniques (CoLTS) as a resource when teaching graduate Pupil Personnel Services Counseling (PPSC) candidates to use a proprietary tool, Decision-Tree model (Taylor, 2017). To assess the efficacy of the proprietary tool developed by a course instructor, a series of instructional methodologies were used to assess candidate learning and their perceived ability to utilize the tool in their practice of counseling individual students in a K-12 setting. Graduate candidates in the Counseling and Guidance program at a small master's institution in California were taught to use the proprietary tool in an instructional setting by utilizing three of Barkley et al. techniques:

1) Think-Pair-Share; 2) Buzz Groups; and 3) Three-Step Interview. After participating in the use of the three types of instructional methods, candidates engaged in application of the collaborative learning techniques related to the Decision-Tree model using role-play simulations, case studies, and application to characters in a DVD movie. Candidates were then asked to respond to a survey (see Appendix B Initial Survey) regarding their perceptions of the usefulness of the instructional strategy when learning to utilize the proprietary Decision-Tree tool.

Literature Review

The literature reference, by Elizabeth F. Barkley, Patricia K. Cross and Claire Howell Major entitled Collaborative learning techniques: A handbook for college professors, emphasizes the use of collaborative learning activities to improve understanding, and reinforce course content by engaging students in interactive, reflective learning experiences. The authors offer this handbook as a resource for implementing collaborative work successfully (Barkley, et al.).

The Barkley et al. collaborative learning techniques implemented in this study include:

- Think-Pair-Share— Think individually for a few minutes, and then discuss and compare responses with a partner before sharing with the entire class.
- Buzz Groups— Discuss course-related questions informally in small groups of peers.
- Three-Step-Interview— Interview each other and report what is learned to another pair.

A literature reference by Elizabeth A. Jones (2014) entitled Examining the influence of structured collaborative learning experiences for graduate students discusses the advantageous use of collaborative learning, aka cooperative learning, by graduate faculty who wish to optimize learning opportunities for their students and increase understanding of course content. Jones found that when utilizing methodology such as Barkley's collaborative learning techniques, students are afforded opportunities to actively engage in working together towards specific stated learning objective (Jones, 2014).

Methods

The study was pre-approved by the university Institutional Review Board (IRB) and included (12) twelve graduate PPSC candidates from the School of Education. Participation in the study was voluntary and did not affect the course grades of study participants. Prior to the beginning of the study, participants signed a Consent Form that explained the purpose of the study, procedures, duration, risks, benefits, confidentiality and debriefing details associated with this research project. Eligible participants were those enrolled in two sequenced counseling courses.

This project was designed as a qualitative research study, to examine perceptions of graduate-level candidates whose program required extensive study of counseling theories foundational to the study of school counseling. Qualitative studies provide a rich source of data in educational research. The descriptive content is the product of concepts, theories and models, producing data, gathered via interviews or document analysis (Merriam, 1998). Merriam (1998) states that findings are a mix of description and analysis—an analysis that uses concepts from the theoretical framework of a study. The collection of qualitative data is multi-tiered, inclusive of an initial survey, case studies, DVD reflections, focus group, and final survey. For the purposes of this paper, discussion is limited to the candidate reflections on the Initial Survey.

Findings

To study the impact of which types of instructional methodologies work best to support candidate learning needs in the most efficacious way possible, an initial survey (see Appendix A Initial Survey) was given to candidates at the end of a two-course sequence of classes designed to prepare educators to effectively counsel K-12 populations. At the end of the second course, candidates were given the Initial Survey (Table 1) to ascertain their perceptions of which of the Barkley et al.

three collaborative techniques best promoted learning to use the proprietary Decision-Tree model, as presented in class. A total of (12) twelve candidates participated in the survey, none of which had ever previously participated in a student learning research study.

Table 1. Initial Survey Open-Ended Questions

Question 1:
Have you ever participated in a student learning research study? Yes ___ No ___
If you responded yes, please provide details.

Questions 2:
In order of preference (1st, 2nd, 3rd), which collaborative learning technique worked best to help you develop a deeper understanding of the counseling theories?
Think-Pair-Share ___ Buzz Groups ___ Three-Step-Interview ___ Please provide details.

Question 4:
As the result of using the Decision Tree Rubric on case study examples from multiple theoretical perspectives, do you feel prepared to use it as a tool when counseling actual clients? Why or why not?

Open-ended questions were used to elicit responses regarding the use of learning strategies and a decision-making tool. Candidates were asked about their past participation in a learning research study, to list, in order of preference, which collaborative technique worked best to help them develop a deeper understanding and whether they felt prepared to use the tool when counseling K-12 students. In responding to their perceived preference of which instructional technique best facilitated learning to use the proprietary Decision-Tree tool, there were two methodologies (Think-Pair-Share and Three-Step-Interview) which were greatly favored over the third methodology (Buzz Groups). Results of the initial survey are illustrated in Table 2 below.

Table 2. Preferential Collaborative Learning Techniques

	First Choice	Second Choice	Third Choice
CoLTS	n	n	n
Think-Pair-Share	(7)	(3)	(0)
Buzz Groups	(0)	(2)	(7)
Three-Step-Interview	(5)	(4)	(2)

Not all respondents chose to delineate second and third choice methodologies. The Think-Pair-Share CoLTS was the perceived best learning strategy for 58% of the respondents. Comments by survey responders included:

“I was able to see the decision-tree model played out,”

“Think-Pair-Share makes me apply what I’ve learned,”

“... It gives me the time to first reflect before I discuss,”

“Think-Pair-Share felt like a structured, organized way to share our thoughts with each other.”

The second perceived strongest collaborative strategy at 41% was that of the Three-Step-Interview. Participant responses included:

“It’s a great way to see an answer from another person and have to explain that to the group”

“The technique helped me because once we got back into our groups of four, other people sharing their experience really helped the techniques sink in more.”

“It helps to act it out and discuss it in groups.”

“Having to describe your partner’s thoughts helped me understand and think about the theory in a new way.”

Another respondent noted:

The Three-Step Interview allowed us a chance to practice the techniques with each other, but then also to pair up with another team to see how they did it and how successful they were. If your partnership struggles, you could learn from another group.

The remaining two questions asked respondents to comment on their experience using the Decision-Tree itself or any modifications that would increase the efficacy of the model (see Appendix B Initial Survey) . Responses could be categorized as those affirming that the Decision-Tree tool provided a “useful structure” in the decision-making process to suggestions to reorder the Decision-Tree sequence of decision-making, beyond the point of initial classification of the nature of the client’s leading issue as cognitive, affective, behavioral or a combination.

Based on the analysis of survey respondents, it was found that using two of the three collaborative tools help support students when learning to use a proprietary Decision-Tree model when working with clients. In addition, the candidates found the proprietary Decision-Tree model to be a useful tool. Respondents stated “I find myself referring to the Decision Tree constantly when doing the role-plays” and “I really find the Decision-Tree helpful because it gives you direction.” The application of theory to practice was clear in the study as it advances student learning beyond the conceptual to practical application. All survey participants noted that the proprietary Decision-Tree model assisted them in the synthesizing of theoretical constructs and their application to particular counseling situations in efficient and systematic manner.

Conclusions

When teaching intricate material such as how to use theoretical concepts and interventions in undergirding the work of future school counselors, college instructors should consider scaffolding candidate learning through the use of collaborative learning strategies. Participants of this study agreed that the usefulness of this instructional method was very beneficial to their learning, comprehension and application of difficult material.

Candidates also need the support of some type of tool when deciding upon which theory and interventions are needed in a particular counseling situation. Historically, didactic methods of teaching were the norm, however, today’s candidates increase their content knowledge and practice application skills in an experiential learning environment. The elegant simplicity of the developed proprietary decision utilization strategy was noted by beginning scholar-practitioners as being particularly useful in generating models of practice when working with

K-12 students and their families. Further piloting of the Decision-Tree model is needed to ensure reliability and validity of the tool when learning theoretical concepts and counseling theories. Additional study is planned to be conducted during the next academic year.

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Appendices

Appendix A: Initial Survey

Dear PPS Candidates, thank you for participating in my research study. Please be aware that your participation (in whole or in part) is voluntary and will not affect your grades in the GED 662 Counseling Theory and Techniques course nor in the GED 663 Individual and Group Counseling and Ethical Standards course.

Sincerely,

Dione B. Taylor, Ed.D.

1. Have you ever participated in a student learning research study in the past? Yes ___ No ___
If you responded yes, please provide details.
2. In order of preference (1st, 2nd, 3rd), which collaborative learning technique worked best to help you develop a deeper understanding of the counseling theories?
Think-Pair-Share ___ Buzz Groups ___ Three-Step Interview ___ Please provide details.
3. Please comment on your experience using the Decision Tree Rubric with DVD counseling session examples and case study examples in class. For example: Did you find that it provided good structure in deciding which theory(ies) and which technique(s) or procedure(s) would be most beneficial when addressing a client's needs? Why or why not?
4. As a result of using the Decision Tree Rubric on case study examples from multiple theoretical perspectives, do you feel prepared to use it as a tool when counseling actual clients? Why or why not?
5. What modifications would you make to the Decision Tree Rubric that would simplify the decision making process regarding the use of theoretical techniques or procedures with clients?

Part 7: Human Resource Development

Encouraging Student Engagement in STEM Fields Through Teacher Training and the Use of Unmanned Aircraft Systems (UAS)

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Abstract

Workforce needs suggest the value of engaging K-12 students in science, technology, engineering, and math (STEM) fields at the middle- and high school level. This Nevada NASA Space Grant Project sought to foster a diverse and capable Nevada STEM workforce by preparing both pre-service teachers and secondary teachers to plan and teach STEM curriculum through the use of Unmanned Aircraft Systems (UAS). The project provided professional development to teachers using an online course, workshops, and webinars led by experts in aviation, educational technology, STEM, and professional development. Several in-person events took place at the Nevada State College campus which is designated as a test site for the Nevada Institute of Autonomous Systems (NIAS). Subsequent lesson plan implementation took place in various classrooms throughout Clark County School District (CCSD) and other secondary (grades 7-12) schools statewide. By helping teachers incorporate drones in the teaching of STEM curriculum, this project generated enthusiasm and had an initial reach of over 3000 students, with ongoing benefits anticipated. The project was funded under NV NASA Space Grant Consortium Research Infrastructure NNX15AI02H.

Keywords: UAS, STEM, NASA, teacher, training, drone

Introduction

The U.S. National Aerospace Science and Aeronautics strategy as well as Nevada's statewide plan suggest the need to foster a capable workforce in STEM fields. For the teacher preparation program at Nevada State College (NSC) as well as area schools and the Desert Research Institute, a grant-funded project explored the possibility as well as the value and outcomes of incorporating UAS in the development of lesson plans and learning experiences associated with STEM curriculum. Teachers of grade 7-12 STEM content were recruited to participate in a fully-funded professional development experience in which they were taught about drones and developed ideas on how they might be used as a mechanism to excite student interest in various subject areas including computer science, mathematics, physics, and biology as well as aviation and engineering.

Goal 7 of the Nevada Science and Technology plan in transportation specifically emphasizes the need to "expand the UAS industry for the state and provide the necessary workforce". This includes specific strategies to (1) provide research and development using unmanned aerial systems that will help attract industry to the state and (2) develop education programs in UAS that will support economic development (NSHE, 2015, p. 26). Additionally, the plan to facilitate the teaching of STEM through the use of UAS aligns with Nevada's state plan to catalyze innovation in core and emerging industries and to increase opportunity through education and workforce development (GOED, 2012, p. 9).

By supporting and training 26 secondary teachers in the state of Nevada's public school settings, the benefits were designed to provide professional development that would then reach the many middle and high school students taught by those teachers in the current academic year. Elements of the project also included the creation and sharing of UAS lesson plans and the development and circulation of a curriculum kit (known as a 'Green Box') that the Desert Research Institute (DRI) designed to reach teachers and students across the state.

Research components of this project intended to identify whether UAS could successfully be incorporated in lesson plans associated with various STEM fields, initial responses of teachers and students, and the early impact of this multifaceted form of professional development and outreach. Data was collected through pre- post surveys that were completed by teachers at the point of application and again three weeks after the submission of lesson plans and a lesson plan competition.

Literature Review

In the U.S., UAS is a rapidly growing market, with applications in a wide range of government, education, and industry areas. Schools across the country have begun incorporating UAS clubs in their after-school offerings, and aviation and other relevant subject areas have begun including them in public school classrooms at all levels. Our project was unique in its effort to use excitement and engagement possibilities of UAS to inspire interest in broader areas of STEM.

Books and resources continue to emerge to assist teachers in their early efforts to include the excitement of UAS or drones in the curriculum (Carnahan, Zieger, & Crowley, 2016). Additionally, emerging articles from around the world indicate that drones have potential to effectively teach STEM content to K-12 students, including those at the primary level (Fokides, Papadakis, and Kourtis-Kazoullis, 2017).

The explosion of robotics, computer technology, and UAS as potential areas of economic development is an area of interest for workforce development and economic diversification in the state of Nevada. Tapping the power of UAS and specifically drones to teach STEM was a specific area of exploration a recent NV NASA Space Grant Research Infrastructure project (Bryans-Bongey, 2017). This research confirmed that removal of the training barrier led to higher levels of UAS availability and increased usage of UAS in the STEM curriculum of the 26 teachers who benefited from the training.

Methods

With the goal being to foster a diverse and capable NV STEM workforce using UAS in the secondary school curriculum, our project was designed with specific inputs and objectives in mind, and extended the two-day training experience through the use of an online course and several webinars. The project collected both quantitative and qualitative data through various means, including Learning Management System (LMS) tracking data, participation numbers, the success of participants in developing lesson plans and a curriculum kit, and pre- and post- survey data from participating teachers. Once admitted to the program, the hybrid design of this training ensured that teachers gained a good foundational understanding of privacy issues and safety rules relating to UAS usage (Federal Aviation Administration, 2016). Lesson plans and post-lesson notes by teacher-participants were also collected through the LMS hosted by [University]. The online assisted with the tracking of quiz completion rates and scores. Participating teachers were required

to complete all aspects of the training to receive continuing education credits. However, the survey as well as other data indicated that receipt of professional development credit was not a motivating factor behind teacher participation in the project. Follow up surveys allowed us to verify the number of students taught based on the teacher training provided and also measured teacher satisfaction with the training itself. Such a concurrent mixed-methods approach was possible based on the inclusion of a qualitative thread of inquiry within a brief and primarily quantitative survey (Creswell, 2013). Because the circulating curriculum kit is still being tested at the time of this writing, there is limited data on the reach and result of that intervention.

Table 1. Below Describes the Design of the Project Based on Goals, Interventions, and Outcomes. Although 30 People Initially Signed up for This Professional Development Experience, a Total of 26 Completed Both Pre- and Post- Surveys.

Goal	Interventions	Outputs
Prepare 25-30 K-12 teachers to develop and implement STEM curriculum through expert training and hands-on experiences with UAS	Support - Provide 30+ participating secondary teachers with Pre- and Post-Orientation, Training, and Support through access to a password-protected site in the Learning Management System (LMS) Inspire - Keynote on Drones: Past, Present, and Future, and Overview Dinner at DRI Engage – Teachers participate in full day hands-on STEM/UAS Institute at Nevada State College.	Access and participation data involving LMS usage reports. Verification teachers have read and understand prevailing guidelines and safety rules based on provided content and quiz results in the LMS. Lesson Plans, Post-Lesson notes, and data on impact to classroom and students collected via post-training surveys and the LMS.
Foster K-12 student exposure and interest in STEM by reaching over 1000 students at secondary school levels	Teach and Develop 5E Lesson Plans designed and taught by participant/teachers. Development of a circulating curriculum kit to be distributed to interested middle school teachers state-wide.	Survey data from teachers. Production of Green Box curriculum kit using lesson plans generated by teacher-participants.
Engage faculty and students that reflect the demographic diversity in Nevada	Participation among secondary level teachers in and around the highly diverse Las Vegas valley.	Teacher application data Demographic information from schools of participating K-12 teachers

Incorporating UAS in the STEM Curriculum: Timeline – 2017

January 10 - Begin Recruiting Participants

February 10 – Enroll teacher/participants in online course

February 15 - Online Professional Development in LMS. This includes NASA resources, a quiz on privacy and safety guidelines, and online discussions with colleagues, as well as a webinar orientation to training.

March 3 - DRI Keynote Dinner for teacher/participants

March 4 – Full Day Training Seminar and Field Experience at Nevada State College (NSC)

March 10 – Teachers submit Lesson Plans to Lesson Plan Competition via Canvas LMS

March 11 – April 30 – Lesson Plan implementation by classroom teachers

March or April – Winning Lesson Plan announced, followed by Class Field Experience at [the University]

April 30 – Follow-up survey distributed to teacher-participants.

May 5 – Continuing education credits distributed

May 30 - Interim Project Report from PI

October 20 – NASA EPSCoR and NV NASA Statewide Meeting held at DRI

Figure 1: NVantage: STEM success through UAS curriculum and discovery –project timeline

By effectively preparing 26 members of Nevada’s diverse teaching force, the project developed STEM teacher capacity via innovative UAS curriculum that had the near-term impact of directly reaching over a thousand secondary students taught by those teachers. Based on suggestions from the grant reviewers, the PI adapted her course (Preparing Teachers to Use Technology) to include a session where students in the teacher preparation program at Nevada State College used programmable drones in class and explored and discussed pedagogical and practical opportunities relating to the use of UAS in the curriculum. Conducted in 2017, the timeline for the project is shown in Figure 1.

Findings

Data generated provided evidence that supports the value of further development and research relating to the training of teachers to use UAS and the incorporation of drones in the secondary STEM curriculum. Five pre-service teachers assisted in the implementation of the project and had high level roles including curriculum design, drone instruction, and lesson plan evaluation. Twenty-seven teacher participants completed the online UAS quiz on privacy and safety guidelines with a perfect score of 10/10. Twenty-six teacher-participants attended the face-to-face training and completed the follow up survey, and fifteen of those participated in a UAS lesson plan competition and received Continuing Education credits for their time and effort. Lesson plans generated from this effort were expertly edited and formatted by the project team, and are publically available at <https://www.smores.com/uycek>.

Based on the data from the pre and post surveys, access to drones for classroom use most teachers increased considerably. Figure 2 shows the self-reported access levels of participating teachers before and after their participation in the project. In the pie charts below, teachers answering that they definitely had access to a drone or drone for use in the classroom (indicated in blue) rose from 17.6% to 30.8 percent and efforts in progress to obtain drones for classroom use (indicated in green) rose from 8.8% to 15.4%.

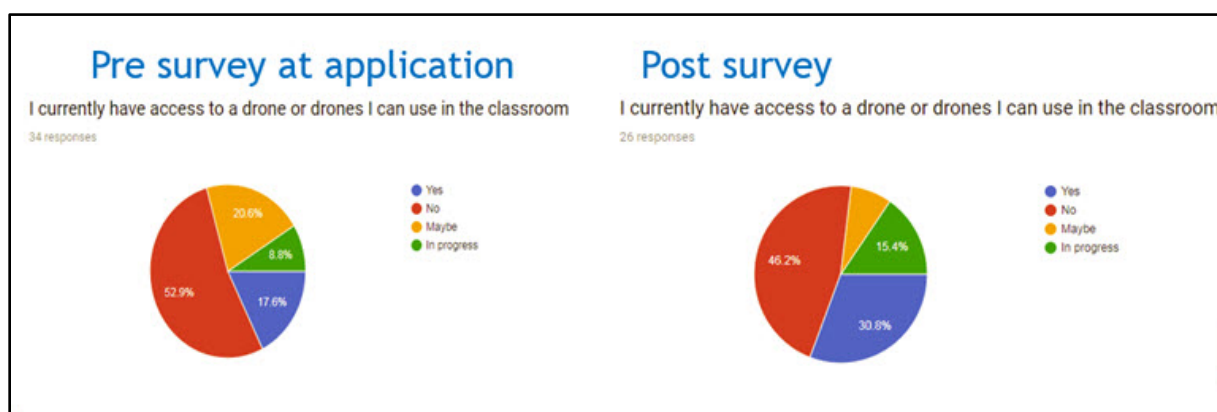


Figure 2: The project led to greater access to drones based on teacher participation

The project also led to greater levels of experience using UAS. The survey asked the teachers about experience level with UAS. It used a scale of 1-5, with 1 being no experience, 3 being some experience, and 5 being experienced. Although the initial response to this question revealed that only three people had a level 3 or higher, the post program survey demonstrated that 13 people had increased their experience to 3 or more. Figure 3 shows the self-reported experience level of participants before and after the program.

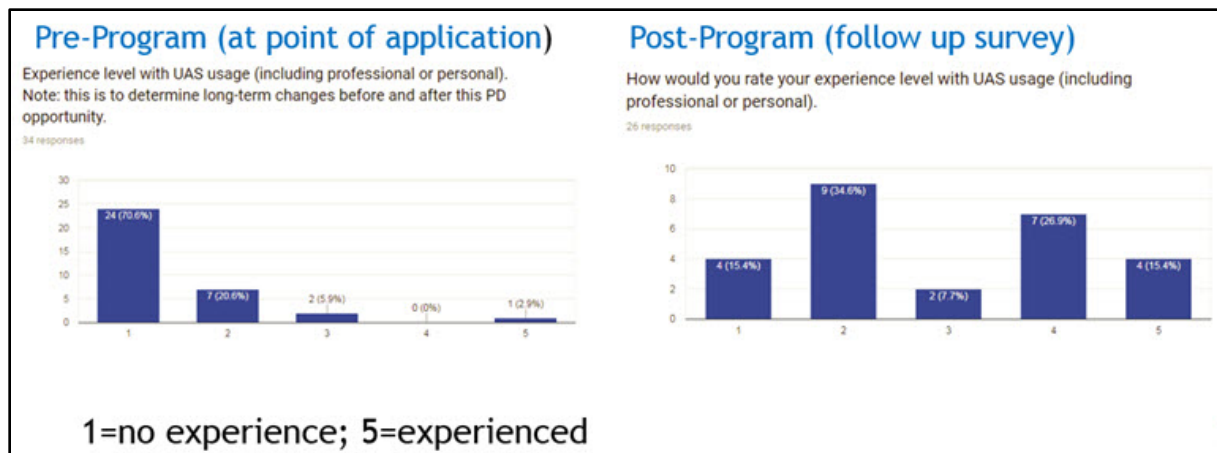


Figure 3: The project resulted in more than 50% of the teacher participants increasing their self-perceived experience level in the use of UAS.

When asked about the current status of UAS/drone usage in the classroom, responses went up substantially from 17.6% before the intervention to 34.6% within the first month after the training. Teachers were either satisfied or very satisfied with training based on a 1-5 point rating scale that was included in the post-project survey. Figure 4 includes that data.

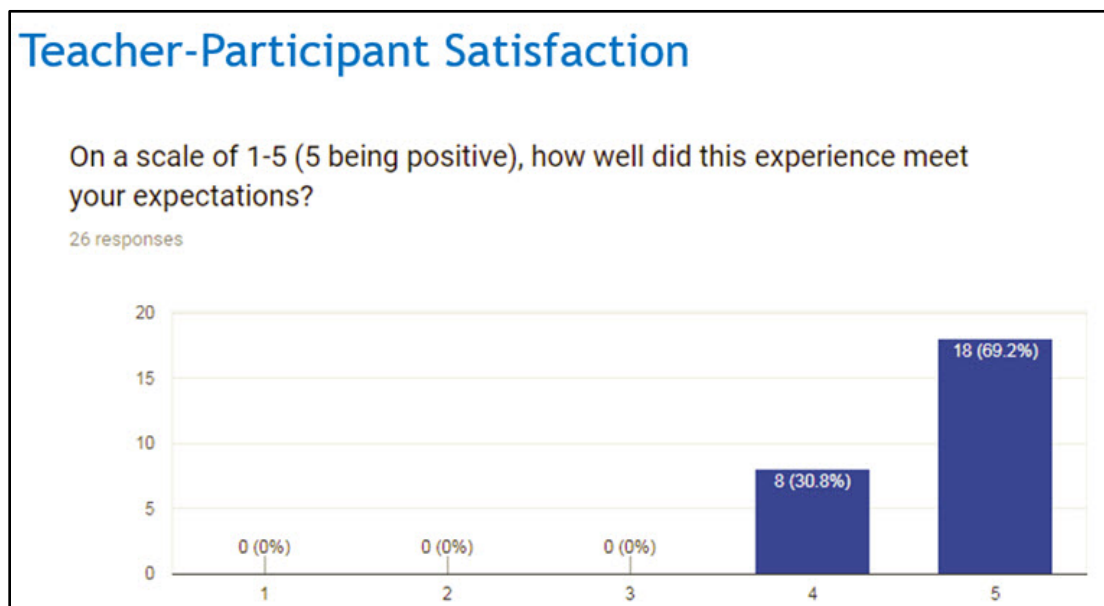


Figure 4: UAS training was appreciated by the participating secondary STEM teachers

Comments that may shed some light on the quantitative data relating to teacher satisfaction focused on the knowledge gained, a vision for including drones in the classroom, and an understanding of the excitement and workforce applications relating to the inclusion of UAS. Positive comments suggest the value of components like the panel discussion on pedagogical and practical uses of drones in STEM and hands-on opportunities in which the teachers experience flight simulation software, programmed drones, and flew drones. A sample of positive comments included:

“This was a wonderful experience that really opened my eyes to applications for my subject that I had never thought of before. I knew NOTHING about drones, and now I feel like I can incorporate many

aspects into my classroom. The rotations at the NSC workshop were my favorite part because it showed several ways that drones could be incorporated.

Using drones in the lesson generated excitement and motivation to learn.

Benefits: future job opportunities for the students, behavioral rewards, real fun.

When the drone was brought into the classroom, all students were suddenly more focused than ever! I really enjoyed this experience because it showed me the connection between my current classroom and drones! “

Suggestions for future trainings included more time, the provision of drones to teacher-participants, travel expenses and opportunities to build drones. A sample of constructive suggestions is included below:

I would have like to have more hands on with drones and a starter kit for all participants consisting of one small drone and one simulator software for my class.

I would have like to have more time to practice with the Drones and the simulator. I also would have like to have a starter Drone and/or a simulator software provided for my class. I had a good time; thanks very much.

If more time was made available, I could have submitted the lesson plan

Since most people were beginners - it would be helpful if we could have a workshop building drones and the vocabulary connected with the training.

Data as to the number of students reached by those teachers who went back to their classrooms and implemented one or more of the activities or strategies developed as part of this UAS in the STEM curriculum project, exceeded our goal of reaching over 1000 students through this project, and this data snapshot was taken approximately one month after the face-to-face training events. In addition, the circulating curriculum kit is expected to further extend the project’s reach by allowing middle school teachers across the state of Nevada to teach lesson and use drones in their own classrooms. Figure 5 includes an image of the Green Box lesson kit.

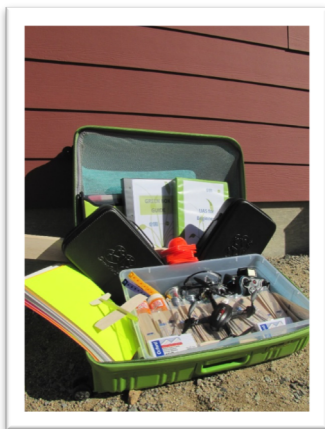


Figure 5. A curriculum kit or green box will be maintained and circulated by the desert research institute.

Conclusions

This project was exciting in that it engaged a diverse group of teachers and students and revealed that UAS can be a practical and motivational means of teaching and learning STEM content at the secondary level. The relatively large number of outputs for a project of this size may be based on the hybrid design that supported orientation, online instruction, web conferencing, advanced

training, and collaboration. For this reason, future researchers may also be interested in how project design impacts efficiency and the achievement of program goals.

In terms of artifacts that were produced, the 14 teacher-created lesson plans addressed a wide range of STEM fields. The continued teaching and reach of participating teachers is expected to have ongoing benefits, and the sharing of excellent lesson plans has been accomplished through online publication. While the Green Box or curriculum kit is still being field tested, its circulation and use is likely to benefit hundreds of middle school students across the state of Nevada.

Data suggests that the project reach has exceeded initial goals in terms of actual benefits to students and that the student response has been highly positive. Future projects and research are needed to expand and evaluate the effects of using UAS in the classroom in terms of learning achievement as well as impact on career interests and choices. Innovators worldwide are beginning to use UAS as means of engaging students and teachers in STEM fields. Additional interventions should be explored as they have potential to pave the way for a diverse workforce ready and able to meet future needs of a sophisticated and technologically-advanced society.

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Part 8: Inclusive Education

Facilitating Inclusive Teaching With Children's Literature

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Abstract

The article examined the power and the importance of making available in classrooms a range of quality inclusive children's literature offering authentic and meaningful representations of characters with disabilities. The article drew from a comprehensive review of literature with a focus on reading inclusive literature with both typically developing students and with students who could identify with characters with disabilities. In addition, the paper examined criteria used and barriers faced by classroom teachers during the process of selection and implementation of inclusive literature. Framed within the theoretical context of Critical Literacy, Selective Tradition, and Social Psychology Theory, the imperative to read inclusive literature in all classrooms was examined. Books about people with disabilities provide an opportunity to help all children perceive persons who look or act differently than they do as part of normal, everyday life. Children may not have contact with people with disabilities so ensuring that all students have access to books about people with disabilities offers an opportunity to experience people with disabilities to build tolerance and acceptance. Through inclusive literature, children can learn to appreciate and include others.

Keywords: children's literature, disabilities, diversity literature, exceptionalities, inclusive literature

Introduction

Drawing on a comprehensive literature review and grounded in three theoretical frameworks, the value and power of reading inclusive literature will be examined. The examination will include analysis of the implementation challenges faced by teachers.

Since 1974, it has been law in the USA that students be taught in the Least Restrictive Environment (The Education for All Handicapped Children Act, 1975). Inclusion, an outgrowth of law, is the belief that students are best taught in the general education setting. The American education system generally supports a policy of inclusion. While desirable, inclusion is not simple or easy to achieve. There continues to be factors that make meaningful inclusion difficult and sometimes impossible. Personal bias, lack of information about individuals with disabilities and other special needs, or inexperience with an individual who may be considered different by the beholder, are factors related to one's attitude that interfere with meaningful inclusion. Inclusion is a practice intended to give each person membership, a legitimate presence and status in a group or other setting. Inclusion extends the concept and practice of diversity into action by creating an environment of involvement, respect, and connection, thus ensuring an environment where every individual has the opportunity to thrive and be valued, respected and supported (Dyches, et.al, 2006; Halvorsen & Neary, 2001; Jackson, 2009).

Fortunately, the review of literature shows that interventions, which impact attitude, can facilitate inclusion. Since attitudes are comprised of interdependent variables - affect, behavior, and

cognitions - by gaining new information about disabilities (cognitions), both affect, and behavior can be impacted, and attitudes can be modified. Inclusion is a process that can be facilitated by using literature to learn about, understand, and appreciate differences. At the same time, we need to ensure that no child or educator is rebuked for his values, beliefs, or culture.

Teachers can de-mystify disability by providing books about disabilities and about people who have disabilities, edifying the reader. The perceived value of the characters who have a disability is enhanced when they are depicted as capable, or the main character, not just shown in a supporting role or as a victim. To reduce fear and ignorance books with accurate information, authentic story lines, addressing realistic issues can be provided. Through books, we can promote the idea that individuals with disabilities belong, can contribute in a meaningful way, and are much more like their typically developing peers than different.

Literature Review

Inclusive literature includes literature with primary characters with disabilities who function within the able-bodied world (Agosto, 2007; Blaska, 2004). Inclusive literature focusing on the richness of diverse ideas, backgrounds, and perspectives, creates opportunities to change attitudes, perceptions and beliefs and help reduce prejudice (Agosto, 2007; Colby & Lyon, 2004; Cox & Galda, 1990; McIntyre, Hulan, & Layne, 2011). Inclusive literature may serve as a powerful instructional tool and socializing agent to help students understand, value and perhaps celebrate the diversity of society. Literature teaches children about who is important, who matters, and even who is visible (McIntyre, Hulan & Layne, 2011). Positive depictions of characters can also help model pro-social behaviors and increase familiarity with disabilities. Using children's literature depicting characters, who are different, such as those with disabilities, in authentic, meaningful roles, not only informs the reader about the disability but enables the reader to view the character as a person who happens to have some differences. When we read about a character with a disability as empowered and engaging we can like and perhaps identify with that character, in spite of the disability (Agosto, 2007; Colby & Lyon, 2004; Lyons, 2004). That is, the reader is able to view the character first as a person, secondarily as someone with a disability. This familiarity can counter the fear that is often the basis of disparaging behaviors towards those with disabilities (Rieger & McGrail, 2015; Routel, 2009).

Inclusive literature continues to be an invaluable approach to promote positive attitudes about diversity, disability, power and social identities such as racial, ethnic, gender, economic class, sexual orientation, and disability identities (Cotton, 2010). Inclusive literature used appropriately has the power to highlight the value of diversity, to build empathy providing children with a view of themselves and others; to examine multiple perspectives countering prejudices and misunderstandings; and to act to promote equity and inclusion (Botelho & Rudman 2009; Colby & Lyon, 2004).

Quality inclusive literature will include the tenants that (a) diversity is good; (b) respectful, people-first language is used; (c) that empathy is promoted for people with disabilities, and (d) that the text affords dignity towards all promoting empathy for people with disabilities and ensuring that text affords dignity to all (Blaska, 2004; Schwartz, 2006).

The value and power of literature is that it celebrates diversity by helping the individual see him/herself as well as others. Literature is one vehicle through which teachers can afford children the opportunity to experience the lives of others, as well as to support, encourage tolerance, and

understanding among children. Literature provides the opportunity to learn about the world, look beyond immediate surroundings to see characters and events that occur in other locations (Botelho & Rudman, 2009), to realize people all have similar aspirations, fears, and goals; to experience new ways of thinking and solving problems through the experiences of characters (Stoodt-Hill & Amspaugh-Carsos, 2005).

Children's literature is a powerful tool that can affirm a child or perpetuate stereotypes (Blaska, 2004, Tsao, 2008). The findings from research conducted with students exposed to multicultural storybooks tend to support a positive change in attitudes toward differences (Macphee, 1997; Vasquez, 2004). When characters with disabilities are portrayed in children's literature the outcome may have a powerful impact on how children view disability, understand themselves and the world. Reading children's literature that contains realistic portrayals of a character with a learning disability has been established to have a positive effect on the attitudes of students without disabilities toward their peers with disabilities. (Botelho & Rudman, 2009; Council on Interracial Books for Children (CIBC), 2013; Myers-Hughes & Bersani, 2009). By reading stories, children have opportunities to see how others go through experiences similar to theirs and to develop strategies to cope with issues in their lives.

Rudine Sims Bishop (1990) believed that literature is a mirror and window for the reader. As a mirror, books reflect to children a view of themselves, and as a window, they show a glimpse of the world outside their experiences, so they might see what other people are like and see themselves as part of humanity. Besides beginning to see the world through a different lens, literature can enable every child (a) to construct a knowledgeable, confident self-identity; (b) to develop comfortable, and just empathetic interactions with diversity; and (c) to develop crucial thinking and the skills for standing up for oneself and others in the face of injustice (Derman-Sparks, 2000, p. ix). Literature provides a mirror for the reader by including characters with whom the reader can identify. Using children's literature, which depicts characters who are different, such as those with disabilities, meaningful roles can additionally empower the reader who may also have a disability, by providing characters in literature with whom they can identify.

Seeing self and others in literature facilitates perspective taking, allowing us to experience what it is to be someone else as well as our self (Beck, n.d.). Readers can view characters who look, feel and have experiences like themselves (Blaska, 2004). Typically, students who do not see themselves reflected in the literature they read may believe that they have no value and little or no importance in society and in school (Dyches, et al., 2006; Jackson, 2009; Sims Bishop, 2003). Through reading inclusive literature, children learn that they are not the only ones with certain fears or problems. By identifying with certain characters, children can empathize with situations and discover ways to deal with their own problems or fears (Botelho & Rudman, 2009). Reading, discussing, and brainstorming tend to be much less threatening to children than real-life confrontations with unfamiliar situations. Through reading and discussion about books and characters, children may learn more about themselves, others, and the world around them (Blaska, 2004).

Theoretical Framework

Three theories are united to provide a theoretical framework for understanding and supporting the use of children's literature in education to positively impact inclusion. The theories employed are Critical Literacy, Selective Tradition, and Social Psychology Theory. Critical Literacy is the ability to read texts in an active, reflective manner in order to better understand power, inequality, and

injustice in human relationships. Literature, in this context can be viewed as a socializing agent for students and a powerful instructional tool to help students understand, value, and perhaps celebrate the diversity of society (Hadaway & Young, 2009; Jackson & Boutte, 2009). The development of critical literacy skills enables people to interpret messages in the modern world through a critical lens and analyze the power relations within those messages (Botelho & Rudman, 2009; Leland & Harste, 2002). Teachers who facilitate the development of critical literacy encourage students to interrogate societal issues and institutions like family, poverty, education, equity, and equality in order to critique the structures that serve as norms as well as to demonstrate how these norms are not experienced by all members of society (Bigelow, 2001; Kovarik, 2004).

Literature selection can be an instructional tool to help students understand diversity, examine multiple perspectives, recognize and detect prejudice, and take action to promote equity and justice (Botelho & Rudman, 2009; Colby & Lyon, 2004; Hadaway & Young, 2009; Jackson & Boutte, 2009; Sims Bishop, 1990). Although children's books can influence children's attitudes and challenge or change traditional stereotypes, in order to do so children's literature and the use of it in the classroom must be sustained, focused, and intensive (Nodelman, 2000). There is a real need to provide children with educational opportunities that allow them to develop "fuller, truer understanding of themselves and the world, and strengthen their sense of themselves as capable, empowered people" (Derman-Sparks, LeeKeenan, & Nimmo, 2015, p.10).

Selective tradition refers to the process by which certain images and characterizations are intentionally selected and validated over others and done to validate a chosen perception or impression (Hulan, 2010). In the process of selecting inclusive literature and teaching children's literature, the teachers may tend to rely on their own instincts. Albeit common, left unexamined, most teachers select literature based on curriculum needs, favorites of children or personal favorites (Evans, Doyle, & Gilbert, 2017). Jipsen and Paley reveal that teachers' selection of literature is a complicated, densely-layered activity which involves a multiplicity of curricular, personal, aesthetic, social, as well as ideological factors—all of which vie for teacher attention in the contemporary classroom (1991, p. 157). Selective tradition as applied to the selection and use of children's literature often results in the exclusion of diverse viewpoints and cultural voices and the perpetuation of racism, sexism and ableism (McNair, 2008; Power, 2003; Taxel, 1984). Reading children's literature that contains realistic portrayals of a character with a learning disability has proven to have a positive effect on the attitudes of students without disabilities toward their peers with disabilities (CIBC, 2013; Myers-Hughes & Bersani, 2009). The omission of literature depicting persons with disability, decreases the likelihood that the experiences or feelings of people with disabilities will be discussed in classrooms. To be excluded from a literature that claims to define one's identity is to experience a particular form of powerlessness—not simply the powerlessness which derives from not seeing one's experience articulated, clarified, and legitimized in art, but more significantly, the powerlessness which results from the endless division of self against self (Fetterley, 1978, p. xiii).

Principles of Social Psychology explain how attitude can be defined as the sum of affect + behavior + cognition (Breckler, 1984). In other words, what we feel, how we act and what we think combine to make up our attitude. Affect, behavior and cognition are interdependent such that a change in one will result in a change in the others (Burns, 1999). By applying this principle, reading (behavior) about children and youth who have disabilities will therefore influence affect (feelings), and cognition or thinking. Indeed, Dyches, Prater & Jensen have shown that use of literature can positively influence perceptions and behavior towards students with disabilities (2003). The influence of inclusive literature can be negative or positive depending on the nature of the reading

selection. This means that, through a transitive process, by choosing literature selections that (a) have characters with disabilities, and (b) have characters who are desirable, empowered, with whom the reader can identify, we are likely to positively influence the readers' attitudes towards individuals with disabilities and can help reduce one of the barriers to inclusion.

Implementation Challenges

There are multiple challenges inherent in the utilization of inclusive literature. Engaging with inclusive literature requires effort to identify and locate books that are culturally authentic and support intercultural competence and not ableism (CIBC, 2013; Dyches, et al., 2006; Hehir, 2002; Rieger & McGrail, 2015). Facilitating inclusion in classrooms requires the availability of many diverse books representing the students in the class and people different from those in the class. Even though many educators support the use of inclusive literature, there are disproportionately few children's picture books addressing the issue of disability and no disability is represented at the same rate it occurs among students in the nation's schools (Blaska, 2004; Dyches, Prater & Jenson, 2006; Jackson, 2009; Myers-Hughes & Bersani, 2009).

Besides a lack of books, finding quality literature presents yet another challenge. Literature exploring disabilities and inclusion is often not in schools or easy to find (Quibell, 2014; Pirofski, 2013). Often books provide inaccurate views of life with a disability and fail to accurately represent the prevalence of various disabilities (Dyches, et. al., 2006; Myers-Hughes & Bersani, 2009). Characters with disabilities are more likely to be supporting characters and often boost the emotional growth of those without disabilities, but not main characters (CIBC, 2013; Myers-Hughes & Bersani, 2009).

Quality inclusive children's literature which include characters who have disabilities, needs to accurately represent the portrayal of life with a disability and the prevalence of various disabilities. The story line supports inclusion when characters with disabilities are empowered, empathy is engendered, information about a specific disability is accurate and when lives of children with disabilities are shown to be genuine (Blaska, 2004; Jackson, 2009; Rieger & McGrail, 2015). When characters are presented as individuals engaging in age-appropriate activities, from different racial and cultural backgrounds, religions, age groups, or sexual orientations then, the reader's attitudes towards those characters will be more tolerant. Illustrations also need to represent characters with disabilities as authentic and representing adaptive equipment accurately.

Having quality books in the classroom is not enough. They need to be integrated in meaningful ways into the curriculum (Halvorsen & Neary, 2001; Hehir, 2002; Jackson & Boutte, 2009). Teacher questions can ensure students look at issues and engage with the material in different ways, critically examine issues and characters, and learn to make informed decisions for themselves.

The classroom teacher, however, can be an active agent in facilitating inclusion by sharing a range of literature and carefully selecting books that are anti-biased to the fullest extent possible. Although there is an underrepresentation of individuals with disabilities as characters in children's literature, a major consideration by teachers must be the selection of books that affirm differences and depict disabilities in all their complexity. Higher quality literature depicting people with disabilities will ensure that dignity is afforded to all people; ensure people first language is used, promote empathy and provide accurate information about disabilities (CIBC, 2013; Myers-Hughes

& Bersani, 2009). Stronger characters in stories will embrace social inclusion, be presented as individuals with unique gifts and challenges (Beck, nd; Jackson, 2009) and be represented from diverse racial /cultural backgrounds, religions, age groups, and sexual orientations. A true inclusive book also meets the criteria of quality literature, which includes accuracy, a believable story line, real characters, use of authentic illustrations; and books with diverse perspectives (Rieger & McGrail, 2015).

Conclusions

Children's literature is suggested as a tool to introduce new information and elicit change in attitudes and practices. The use of high quality inclusive literature introduces new information, improves understanding and possibly modifies attitudes and practices towards people with disabilities. The ways in which the students interact with the literature and with each other around the literature, may introduce new practices. Both information and practices can positively influence attitude towards people with disabilities and special needs, or anyone who may be somewhat different. Greater understanding leads to greater acceptance.

Studying the use of stories and books is not intended to shape student attitudes in a direction we believe to be right, but rather to provide all students complete, accurate and authentic information about individuals with disabilities and other special needs in order for them to be empowered to make informed decisions about what to believe and how to behave, towards people with disabilities, for themselves.

Literature that explores disabilities and differences can play a major role in influencing children's beliefs and attitudes about disabilities. The availability of books with characters with disabilities, the authentic representation of these characters, the quality of stories, and the level of awareness and use by teachers must continually be examined. A key to facilitating inclusion is empowering students to make informed decisions for themselves. Although these thoughts are grounded in research, and many seem self-evident, additional study of the impact of diverse and varied selections on student attitude is warranted.

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Part 9: International Education

Motivations for Study and Work Abroad

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Abstract

Recent years have seen a rapid increase in human migration around the world. Social cartographers, economists, educational comparativists, and sociologists have looked at motivations for this accelerating mobility across diverse demographics. Our research takes empirical data collected from over 400 expatriates living in China, offering an analysis of their motivations for study and work abroad. Utilizing Ravenstein's (1889) Push-Pull Theory of human migration, the research contends that there are two layers of motivations, surface factors and root factors, that work together to compel millions each year to go abroad. The results of both univariate (frequencies and means) and multivariate (linear correlations and ANOVA) analysis build the foundations for a new theoretical premise, a two-level hierarchical linear model. Surface motivations for study and work abroad are diverse, but the root motivations consolidate around a few central variables. The most salient of these root motivational factors is our "purpose" variable, which explains fifteen of our surface motivational factors including education issues in home country ($F=18.05$), faith/spirituality ($F=12.94$), family influence ($F=12.62$), alumni influence ($F=12.62$), opportunities in China ($F=12.48$), international experience ($F=12.29$), teacher influence ($F=12.19$), and prior Mandarin study ($F=11.59$).

Keywords: human migration, motivation for study, work abroad

Introduction

The changing landscape of human and cultural geography around the world has seen movements as dramatic as the shifting of tectonic plates, from the international/external migration from countries in crisis to countries that shelter, to the domestic/internal migration of hundreds of millions of rural Chinese looking for opportunity in the urban metropolis (Parker & Parker, 1986). Though the world is less monolithic, with cultural centers dispersed around the globe, there remain popular destinations for students and professionals alike. The US continues as the world's key receiving nation, with over one million students entering the US and studying at an institution of higher education in 2016/17 (IIE, 2017). In the same year, China received nearly half a million foreign students who had come to the Middle Kingdom, with nearly two thirds studying at university and a third studying at the K-12 level (Linder, 2017). With multinational corporations and setting up factories, regional headquarters and corporate centers in China's largest cities, the influx of expatriates has ballooned in recent years. Rising domestic companies are also looking abroad for human capital, and international expansion has resulted in both inflows and outflows of professionals and workers that have left home for business opportunities overseas.

The most common reasons for study and work abroad range from family and educational background to the ranking of the institution to opportunities for advancement to travel and tourism. These motivations encompass a broad and inconsistent range of factors, and without insights provided directly by foreigners, it is difficult to evaluate the true motivations for their going abroad (Iwasaki, 2007, p. 278). In this study we will examine both surface and root motivations for expatriates living in China.

Research Questions

- Who are the expatriates entering into China?
- What are their reasons for leaving their home country?
- What are their reasons for coming to their host country?
- What are the explicit determinants (surface factors) of their decision to study or work abroad?
- What are the implicit determinants (root factors) that prescribe the explicit determinants (surface factors)?

Context

From vast regional differences (Hannum, 1999) across their expansive territory to the moral decline in the hearts of youth (Jin, 2003), China is neither a utopia nor a developing nation. It is home to the second tallest building in the world, the third nation in the world to send a man into space, and the world's largest consumer economy. It is a nation of contrasts, with meritocratic standardized tests that encircle communist ideologies of egalitarianism still taught in schools (Wan, 2001). China poses now for the world's gaze, still unsure of who she is or who she will become, but filled with the angst of a colonial past and a contradictory present. It is against this backdrop that we find millions of immigrants, visitors, volunteers, students and workers who make their way to China's cities and villages.

Literature Review

From the crossing of the Aleutian land-bridge by ancient Asian ancestors, to the three ships of Columbus, to the Nordic conquerors of the North Sea, human migration is a consequence of circumstances, greener pastures, aspirations, mission and coin. Today, migration is either extremely dangerous, as it is across the Rio Grande or it is a simple matter of buying a ticket for a cross-Pacific plane.

Modern concepts of human migration are largely based on the Push-Pull Theory, and it applies student mobility across national boundaries. "On the one hand, push factors operate within the source country and initiate the students' decision to undertake international study: on the other hand, pull factors operate within a host country to make that country relatively attractive to international students" (Pimpa, 2005, p. 433). Such studies suggest that the choice of university and decision to study abroad is a multi-dimensional process that combines different choice factors at different stages of a decision-making process (Sojkin, Bartkowiak, Skuza, 2012). Consequently, it is important to include an evaluation of conditions and circumstances in both the receiving and sending country.

Some of these factors include encouragement from family, influence of instructors, testimonies of alumni, prior travel experience, economic opportunity, international experience, and a variety of other push and pull factors (Penn, 2009).

Family Influence

The family contributes largely to an individual's decision to study or work abroad. For some, the direct input of family members can steer decisions. For others, the proximal connection to family networks keeps them close to home, and unable to leave their home country. Marriage and children

are certainly limitations for some who desire to go abroad but must juggle family obligations with personal aspirations. For a few, going abroad is a chance to leave behind baggage and drama, conflicts and history with family members. “Family members have the ability to shape behavior and lifestyle, influence self-concept, and contribute to the formation of values and attitudes” (Pimpa, 2005, pg. 433). For those going abroad, parental influence extends to the choice of destination city and country (Pimp, 2005). A study conducted by Aryee, Chay, and Chew (1996) revealed a significant positive relationship between receptivity of an expatriate assignment and spousal support as a coping mechanism.

Instructor Influence

Research demonstrates that faculty involved with students within a university program serve as role models, encouraging students while advocating for their countries or regions of interest as it is studied and taught (Cagle, 2011). Faculty-led study abroad is a popular choice, attracting significant numbers of students who might otherwise be unwilling to take a leap of faith with a third party or university-sponsored overseas experience. When faculty integrate external experience with course goals and curriculum, students exhibit higher motivation to participate in study abroad opportunities (Goodman, 2009). Finally, “faculty can also play a critical role in engaging study abroad students in continued language study and cultural exploration after their return to their home campus” (pg. 611).

Alumni Influence

Study abroad alumni are natural recruiters for universities. Their testimonies inspire and make real the information students receive from their study abroad centers on campus (Cagle, 2011). Students who return to their home countries have also reported “significantly higher rates of perceived improvement across all learning outcome measures after going abroad” (Cisneros-Donahue, Krentler, Reinig, & Sabol, 2012, pg. 177). As these stories are told by alumni, the program establishes a consistent reputation of both worldly experience and academic rigor. Future students are largely recruited through referrals, word-of-mouth, and first-hand experiences of upperclassmen. The confidence in a study abroad program is directly influenced by the quality and quantity of information shared by alumni to prospective students, particularly the articulation of objectives, expectations and outcomes (Kinging, 2008).

Cultural Proximity

Previous studies have found that “cross cultural motivation related more positively to expatriate adjustment in less culturally distant contexts, where assignments were arguably less complex owing to greater cultural familiarity” (Chen, Kirkman, Kim, and Tangirala, 2010, pg. 1125). Exposure to or study of the host country’s language narrows the cultural gap and lowers the affective filter for students who want to spend a semester or two in a foreign country. Most semester or year programs require at least two years of university-level language instruction prior to their arrival date. Study abroad can also be primed by prior cultural experiences, whether through direct contact or periphery engagement in the art, cuisine or traditions of the host country. In a study by Penn and Tenner (2009), Black students were found to choose Africa as their destination country while White students preferred European destinations, “perhaps in an attempt to learn more about their own culture and history” (pg. 277).

Employment Prospects

With the rise of English as China's unofficial second language, the demand for English teachers has continued to rise year on year (Chang, 2006). In addition, the prestige associated with the English language has provided new employment possibilities for English-speaking expatriates in a variety of fields. Multinational corporations with a presence in China value the presence of expatriates in senior management positions, as they maintain the home country's values while integrating the company to the host country's context (Findlay, Li, Jowett, and Skeldon, 1996). Finding individuals who fit this bill is difficult and oftentimes compromised by an exaggerated overemphasis on orthodoxy or contextualization, company loyalty or cultural distance.

Educators and professionals with international field experience are sought out by companies from their home countries, making them extremely competitive in the job market (Bolino, 2007; Salmons, Partlo, Kaczynski, & Leonard, 2015), their professional development accelerated and their perspectives, networks, and skills globalized. When they left their home country, they may have struggled to find employment or promotion, but with an international stint, they become the solitary unique resume amongst a sea of vanilla. These findings suggest that not only can one gain the experience and achieve growth in exponential ways through international assignments, but the exposure abroad can also pave way for promotional opportunities in individuals who are aware of this professional potential (Aryee, Chay, Chew, 1996). For most rising companies "increased globalization places greater emphasis on expatriate assimilation and transfer of knowledge across the firm, which is becoming a key source of competitive advantage" (Mezias and Scandura, 2005, pg. 531). In other words, it is in a company's best interest to encourage international mentoring and knowledge transfer to promote efficiency and a fluid adjustment for an expatriate working overseas. While international experience does not guarantee future promotions or professional advancement for an individual, the experience can enhance the possibility of upward mobility within a company.

International Experience

With foreign language improvement as a likely byproduct for those living abroad, it can influence those intending to build upon their foreign language skills overseas. In a previous study conducted on American students pursuing study abroad in Japan, it shows that "students without any prior experience studying Japanese improved more during a summer intensive program in Japan than those who studied in an equivalent summer intensive program in the United States, both in speaking and reading" (Huebner, 1995). With more opportunities to practice their foreign language ability on a daily basis through practical and professional settings, the increase in foreign language usability will likely improve one's communication ability in a foreign country. In a second study conducted on American expatriates studying abroad in China, its findings show that "students who spoke Chinese outside of class more consistently made more progress in speech rate than those who did not" (Du, 2013, pg. 141). Where increased foreign language knowledge can act as an incentive for expatriates, a heightened cultural awareness of their host country and surrounding cultures can also serve as a foreseeable benefit. A different study shows that American students studying abroad in Japan gained aspects of language "that are not measured by conventional testing, namely, the ability to interact socially to achieve joint goals with their interlocutors" (Iwasaki, 2011, pg. 189). The ability to communicate through verbal and non-verbal cues with cultural awareness helps one adapt in a foreign country, and studying abroad was positively associated with increases in beliefs that cultural sensitivity was enhanced (Cisneros-Donahue, Krentler, Reinig & Sabol, 2012, p. 176). Study abroad students felt they returned with a

significantly increased understanding of their reactions in different settings and the significance of language and cultural differences. Perceptions of knowledge regarding the interdependence of countries around the globe also increased significantly” (Cisneros-Donahue, Krentler, Reinig & Sabol, 2012, pg. 176).

Additional Factors

Along with the aforementioned factors influencing one’s decision to pursue opportunity abroad, philanthropic and humanitarian efforts can also contribute as factors of influence. Previous studies have shown that “much of the international philanthropic investment has been directed at public information, policy change and building the Chinese research knowledge base” (Redmon, Chen, Wood, Li, Koplan, 2013, pg. ii7). While working in a foreign country can be challenging on logistical and cultural levels, collaborations between countries stemmed from the exchange of knowledge and efforts can be a goal for expatriates aiming to contribute in social reform. The exchange of knowledge and information can contribute ideas on how to resolve social issues, and “conducting research in developing countries enable students to bridge gaps in ecological knowledge while gaining first-hand experience in cross-cultural collaborations. This exposure will be valuable to scientists who seek to address ecological questions that transcend political boundaries (Capps, Davison, Kapetanacos, Moslei, Wagner, & Flecker, 2009, pg. 334). Whether it be ecological, social, environmental or other such matters, these influences driven by an altruistic and humanitarian approach can also serve as factors for expatriates while “changes in policy and environmental factors impact strongly on the choice international education services” (Pimpa, 2005, p. 436).

Methods

Instrument

Empirical data for this study was collected through online and paper surveys conducted in English. The survey for this research explored expatriates motivation for study and work abroad. The survey included 34 questions. The first 13 questions probed demographics and underlying factors such as age, gender, marital status, highest level of education, passport country, monthly salary, and field. This was followed by 19 Likert scale questions for internal and external motivations for work and study abroad. Lastly, two short-answer questions concluded the end of the survey to highlight the most significant influence on his/her decision to choose China, and his/her biggest challenge after arriving in China as an expatriate.

An initial pilot study was administered to 24 expatriates through paper distribution on public streets in Shanghai, China on April 6, 13, and 20, 2017, to ensure that the survey instrument was concise and easy to understand. Questions and positive feedback from six participants in the pilot study were noted, which contributed to the final revision of the survey. After the survey instrument was finalized, an identical online version of the survey was created on typeform.com for online distribution, with the beginning of each informing participants that information collected is to be used for research purposes.

The sample (N=401) consisted of English-speaking adult expatriates residing in China for work or study. Of the 401 participants, 313 were recruited through online social media platforms, and 79 through in-person paper survey distribution at a Chinese language school, university, and public streets in Shanghai, China.

Online Platforms

The 313 participants recruited from online social media platforms were reached using snowball sampling. The two main online platforms used were WeChat, China's most popular online social media network, and Facebook, a popular online social media network widely used around the world. In order to reach a diverse demographic of expatriates in China, WeChat was used to reach expatriates residing in China using the mobile application to communicate and network within China, and Facebook was used to reach expatriates residing in China who continue to use the social media platform to maintain network and connections outside of China through virtual private network (VPN). The online survey was posted on 17 Facebook groups: (a) Young Expats in Beijing; (b) EXPATs in Shanghai; (c) Hangzhou Expats Club; (d) China expats & Jobs and internships in China for foreigners; (e) Expats World Shanghai; (f) Xianyang Expats; (g) Expats in China; (h) Beijing Expats; (i) China expats; (j) Shanghai Expats; (k) Guangzhou Expats; (l) Shenzhen Expats; (m) Foreigners in Beijing 2017; (n) Suzhou Expats; (o) Hangzhou Expats Group 2011; (p) Shenzhen Now; (q) Foreigners in China, and 12 WeChat groups: (a) Expats in Shanghai; (b) GGI Business; (c) SH Talks and Events; (d) French Connection; (e) USA-China Connection; (f) Shanghai Jobs; (g) USA Abroad; (h) Networking Marketing; (i) Expats Families in SH; (j) Shanghai Teaching Jobs; (k) Lectures in Shanghai; (l) Beijing Expats.

Paper Distribution

As one of the most developed cities in China, Shanghai ranks as the most competitive in global talent, followed by Beijing, Guangdong, and Jiangsu (CCG, 2017). To take advantage of its myriad of international students, paper surveys were distributed at Hutong Chinese Language School, where enrolled students learned Mandarin Chinese and had the option to pursue part-time internships, and the College of International Exchange at Shanghai University where international students pursued specialized fields for their college degree. Paper surveys were also distributed around public street corners where expatriates would often frequent around surrounding cafes and shopping centers. 79 responses were collected over the span of 12 weeks.

Demographics

Passport Country

The sample (N=401) consisted of expatriates from 63 countries, with United States in the lead with 139 participants, attributing to 35% of the total. For efficiency and organizational purposes, countries were categorized by continent. Expatriates from all seven continents participated in the study, with the majority from North America (41%) and Europe (29%), which includes countries where English is regarded as a native language. Following closely behind, participants from Asia (18%), Africa (5%), Eurasia (3%), South America (3%), and Australia (2%) also contributed to the study. Of the total, 2% of participants chose not to disclose their passport country. The breakdown of passport country categorized by continent is shown in *Figure 1*.

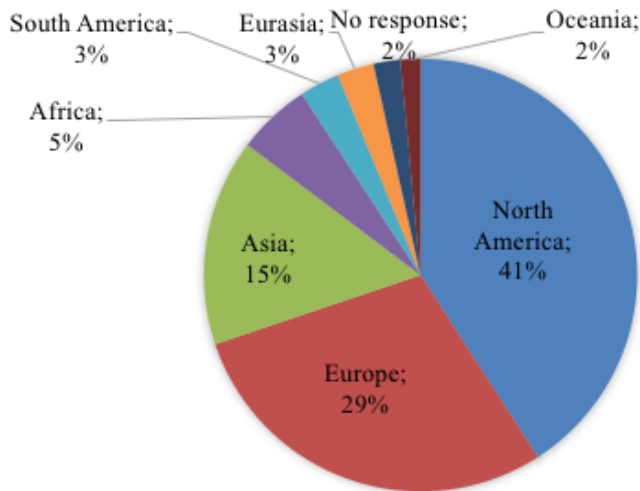


Figure 1. Passport country of 401 participants categorized by continents.

Purpose in China

To have a general understanding of the reason why people leave their home country to pursue opportunities outside, Participants were asked to indicate their purpose for being in China, and to check all that apply amongst a list of options. A majority of participants were in China for full-time work, with those seeking work as the next majority of the pool. Those who were full-time students, and seeking higher education in China followed, with those working part-time and studying part-time making up a smaller minority in the expatriate community surveyed in China. Those who were in China for neither work nor study were categorized in “other”, and those who listed reasons noted full-time parent, homemaking, and family as their purpose. The tally of the participants’ purpose in China is shown on *Figure 2*.

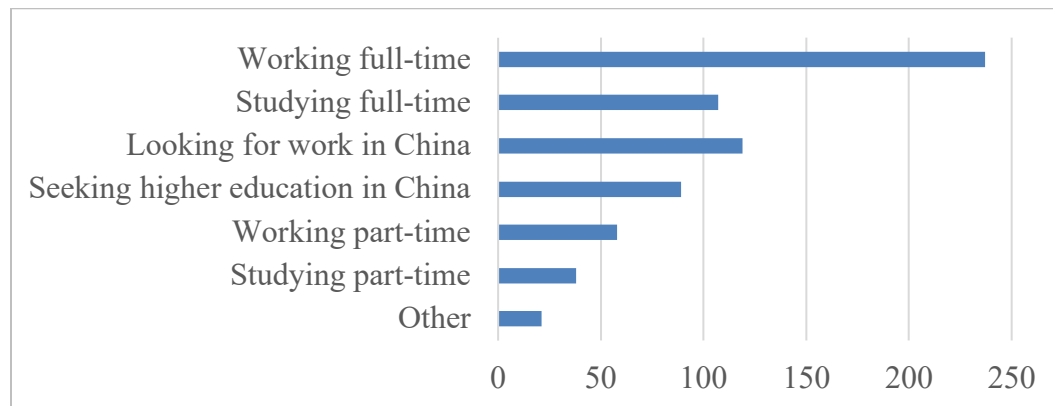


Figure 2. Subjects reported their purpose for being in China.

Gender

The breakdown of participants’ gender was a close tie with male (49%) and female (51%) expatriates in China contributing to the research.

Age

Majority of participants comprised of expatriates between the ages of 27-35 years of age (39%), while those between the ages of 18-26 years of age (33%) followed closely behind. Participants ages 35 years of age and above (28%) accounted for a little over a quarter of the participant population, affirming that the majority of expatriates who participated in this research are in their 20's and 30's. The breakdown in years of age of participants is shown on *Figure 3*.

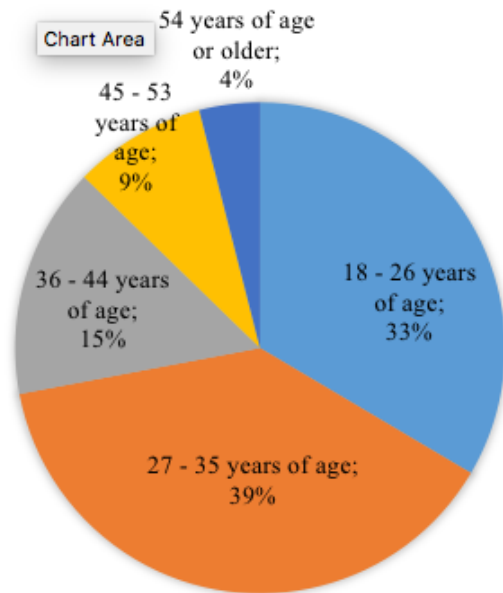


Figure 3. Participants' years of age.

Marital Status

With participants in their 20's and 30's making up close to three quarters of the research population for this survey, it's interesting to consider the marital status of participants of expatriates in China. Participants were given four choices to choose from: (a) never married; (b) married; (c) divorced; and (d) widowed. Keeping in mind the varied degrees of family obligations and responsibilities, the ability to travel and stay mobile as an individual would be more convenient with the luxury of independence and less family ties. Of the expatriates who participated in the study, those never married (69%), widowed (1%), and divorced (5%) contributed to three quarters of the research population. Married participants contributed to a quarter of the research population. The breakdown of marital status is shown on *Figure 4*.

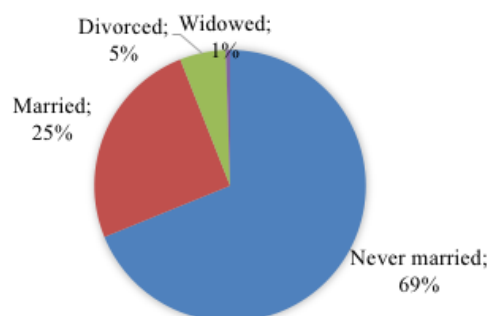


Figure 4. Marital status of 401 participants.

Education

Highest education level of participants was categorized into four groups: (a) High School Diploma; (b) Bachelor's Degree; (c) Master's Degree; and (d) Doctorate's Degree. The breakdown of highest education level amongst participants is shown in *Figure 5*.

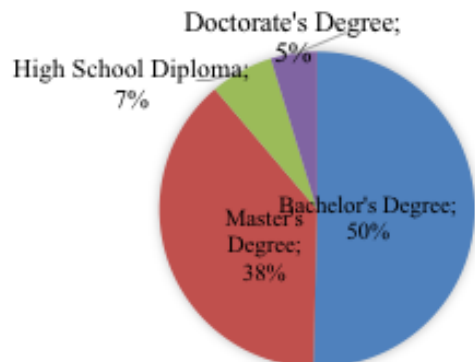


Figure 5. Participants' highest level of education.

Field of Work or Study.

To have a better understanding of the type of specialization and talents China attracts in expatriates, the 401 participants were asked to write down their field of work or study. Responses were then grouped into eight categories, and a ninth was added for those who chose not to respond. Of those who responded, Education is most popular with 111 participants working or studying in, but not limited to: English language teaching, teaching in other subjects, and education administration. Business and Economics was the next most popular category, with 97 participants working or studying in, but not limited to: investment banking, international business, and consulting. Language study, under Humanities and Social Science, was the third largest category, with 74 participants working or studying in, but not limited to: Chinese language study, linguistics, and translation. The remaining quarter of the research population grouped under Communications (8%), Engineering and Computer Science (8%), Arts (6%), and Health and Human Development (3%), with 11 participants choosing not to respond. The breakdown of field of work or study by category is shown in *Figure 6*.

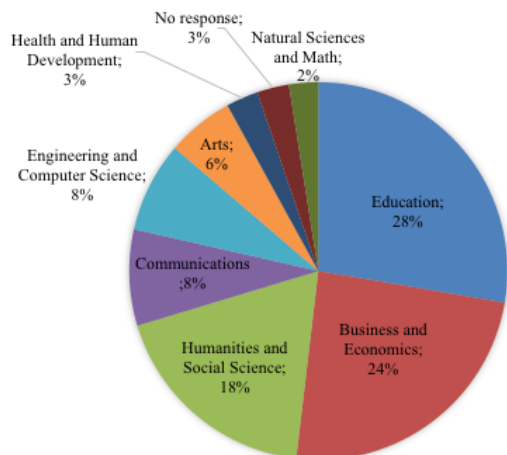


Figure 6. Participants' field of work or study.

Length of Time in China

As China continues to attract international talent and opportunities for expatriates, noting the span of time participants have been living in China and their estimated length of further stay helps indicate whether there is permanence to this trend. Participants were given the option to select one of five options to indicate how long they have been living in China. The expatriates surveyed seems decently spread amongst the different lengths of stay, with one third of participants claiming that they have been living in China for less than a year, making up for the largest majority of the research population. Those who have been living in China for five or more years also makes up for nearly a third of the population, leaving those who have been living in China between one and four years making up for more than a third of the population. The breakdown of the participants' length of stay in China is shown on *Figure 7*.

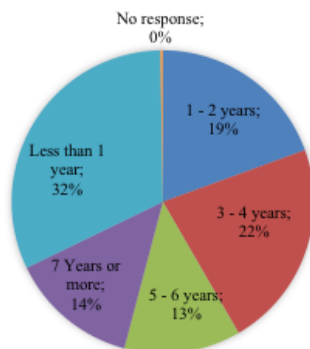


Figure 7. Length of stay of participants in China.

Following the initial question in regards to length of stay in China, participants were also asked to indicate their projected length of further stay in China. The survey listed six options, and participants were asked to select one of six to indicate how many more years they plan to stay in China. With the largest majority claiming they would like to stay another one to two years, and with almost a quarter claiming less than one year as their projected timeline, the two groups combined makes over a half the surveyed population. About a third projects to stay between four to six years, with another 5 percent projecting to stay seven years or more, leaving a tenth of the population uncertain as to how long more they plan to stay in China. The breakdown of the participants' projected length of further stay in China is shown on *Figure 8*.

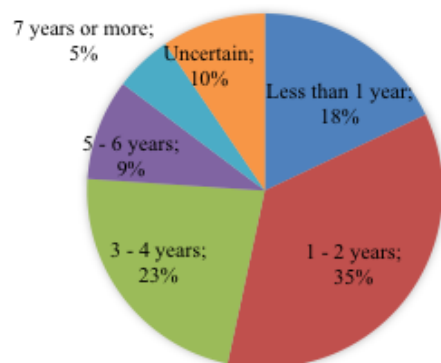


Figure 8. Projected length of further stay of participants' in China.

Limitations

With the age of technology contributing to the convenience of survey distribution, language remains the core of connection and tool of communication. Due to the nature of this survey, only English-speaking expatriates were asked to participate in this research study, which does not account for expatriates who are non-English speakers working or studying in China. Online surveys disseminated quickly and attributed to 78% of research participants, and with time constraints and limitations in resources, the remainder 22% were data collected through paper surveys in Shanghai, China. With almost a quarter of the population confirmed to be expatriates based in Shanghai, China, responses may reflect a larger demographic of expatriates who are located in China's most developed cities.

Analysis

The descriptive analysis of our demographics was followed by analysis of variance (ANOV-A) and Pearson linear correlations.

Surface Factors for Study/Work Abroad

Using a Likert scale of one to five (1=completely disagree; 5=completely agree), participants were asked to indicate their agreement or disagreement regarding a list of 19 factors of influence. For this study, our Likert scale is assumed to result in interval level data. International Experience ($M = 4.30$, $SD = 2.23$), Travel in China ($M = 3.99$, $SD = 3.2$) and Job Opportunity ($M = 3.84$, $SD = 1.28$), Learn Mandarin ($M = 3.680$, $SD = 1.35$), Network ($M = 3.63$, $SD = 1.31$) and Job Advancement ($M = 3.16$, $SD = 1.50$) averaged above 3.0 on the Likert scale (see *Figure 9*).

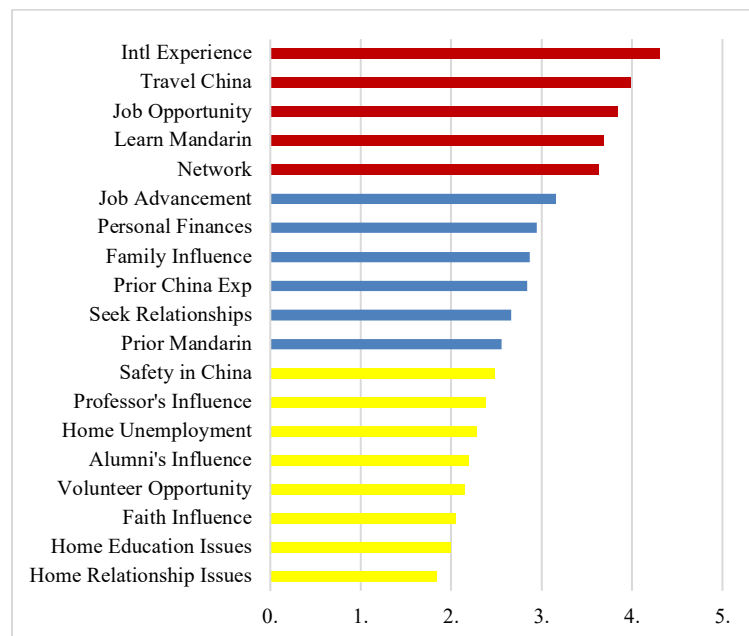


Figure 9. Likert scale response on surface motivations for work and study abroad.

Factors that were rated low included Home Relationship Issues ($M=1.84$, $SD=1.24$) and Home Education Issues ($M=1.99$, $SD=1.34$), both averaging under 2.0 on the Likert scale.

Root Factors for Study/Work Abroad

An ANOVA was run on our categorical Root Factors (e.g., Gender, Marital status, Highest Degree, Prior China Experience, Country of Origin, Purpose in China, etc.) and our interval Surface Factors (Likert scale questions including family influence, educational issues in home country, faith/spirituality, alumni influence, international experience, teachers' influence, prior Mandarin study, networking opportunities, financial support, job advancement, etc.).

Table 1. ANOVA on Purpose in China as a Root Motivational Factors and Surface Motivational Factors for Study Abroad and Work Abroad

Influences on Study/Work Abroad	F	p-level
Education issues in home country	18.04887	0.00000000054
Faith/Spirituality	12.94086	0.000000068
Family	12.62393	0.000000045
Alumni	12.61689	0.000000069
Job opportunities in China	12.4804	0.000000082
International experience	12.29125	0.00000011
Teachers/Professors	12.19429	0.00000012
Prior Mandarin study	11.58852	0.00000027
Networking opportunities	9.57944	0.00000041
Financial support	9.04164	0.00000084
Job advancement in home country	9.03015	0.00000085
Philanthropy/Volunteerism in China	8.34734	0.00002
Prior China experience	6.53223	0.00026
Travel opportunities in China	4.89374	0.00237
Seeking personal relationships	4.06582	0.00729

Purpose in China had the largest sum of F-values ($F_{tot}=156.28$) for Study/Work abroad surface motivational factors. Purpose in China had the highest F-value ($F=18.05$, $p<0.05$) of any ANOVA pairing of root and surface motivational factors (see Table 1).

In fact, out all ANOVA results, only ten pairings were shown to have an effect size over 10.0, and amongst these Purpose in China was the Root Motivational Factor for eight out of 10 pairings.

Root Causes of the Top Three Surface Motivational Factors

Surface Factor 1. International Experience

Purpose in China ($F=12.29$), Marital Status ($F=5.38$) and Prior Time in China ($F=2.93$) have the largest effect on International Experience as a Surface Motivation for study/work abroad. There is a wide gap between Purpose in China and both Marital Status and Prior Time in China. All post-hoc tests revealed significant differences between each of the purposes (i.e., study, work, work & study, family) in relation to international experience except between study and work & study. As there is overlap in the way the response choices were set up, this was expected. Individuals who came to China to study were motivated most greatly by their interest in gaining international experience ($M=4.53$). The opposite is true for those who came to China because of their family (typically as a trailing spouse) who valued international experience much less ($M=3.53$).

Surface Factor 2. Travel in China

The One-Way ANOVA on Root Factors revealed that Gender ($F=12.81$), Marital Status ($F=5.41$), Purpose in China ($F=4.89$), Prior Time in China ($F=2.54$), and Field/Are ($F=1.48$) have the

greatest effect on Travel in China as a motivation for study/work abroad (See Figure 12). Gender had the strongest effect size on Travel in China. Females ($M=4.20$) rate Travel in China higher than their male ($M=3.78$) counterparts. Travel is more important for women than it is for men.

Surface Factor 3. Job Opportunity

Job Opportunity was rated as the third most important surface motivation for study/work abroad. Purpose in China ($F=12.48$); Gender ($F=5.43$), Prior Time in China ($F=2.63$) and Home Country ($M=2.00$) influenced job opportunity. Out of all pairings, post-hoc tests reveal that the only statistically significant differences between categories was between study and work ($p<.05$), work and family ($p<.05$) and study and study/work ($p<.05$).

Conclusions

Based on the influential factors provided from previous studies and my analysis from research, majority of expatriates in China are unmarried individuals seeking international experience. The findings of this research can help study abroad programs and companies recruiting expatriates for work in China in two ways: meet the needs of their program and company by improving recruiting strategy to find their ideal international candidates, and by providing helpful resources and tools to meet the needs of recruited expatriates.

Recruiting strategies may differ depending on the program goals and company industry, but in knowing the motivations and influences behind potential candidates, strategies can include highlighting those qualities in international marketing material. Study abroad programs in China recruiting international students may choose to highlight the location of its program and the perks of its global landscape to attract prospective students, while also promoting its unique opportunity to connect with locals through the experience. Pictures and promotional videos as visual aids can be helpful representations of what candidates can expect from their international experience. Visual aids that include China's lifestyle, people, food, culture, and environment can summarize and highlight certain qualities of its study abroad programs, which can give candidates an idea of what they can expect out of the international experience the program has to offer. If possible, connecting prospective candidates with current study abroad students within its programs might also be helpful as a recruitment strategy. Enrolled students eager to share their international experience may serve as a positive influence and be able to provide a personal perspective and first-hand encounter for those curious and interested. Companies in China recruiting expatriates from abroad may find it beneficial to promote the location of their work campus. International companies listing statistics in percentage of Chinese nationals and international workers in their recruitment profile might be an incentive for those looking to work in an international environment. In addition, promoting employment material in universities and international campuses in North America and Europe may be more helpful in attracting the unmarried and educated demographic seeking work experience in an international sphere.

While successful recruitment of expatriates for study abroad and work contract is important, programs and companies that go the extra mile to ensure that the needs of their international recruits are met will help ensure retention in their study abroad programs and business. Study abroad programs operating in a semester or quarter system can utilize campus breaks and holidays to promote information on travel around China. By encouraging international students to participate in group trips, students may feel safer traveling in groups and less intimidated by the challenges presented when navigating through foreign environments. Since language, culture, and

everyday lifestyle may pose as a challenge for expatriates, it may be helpful for programs and businesses to have welcome handbooks and guides readily available as resources for those fresh recruits new to the area. Handbooks and guides including local restaurants, local and national transportation systems, markets, emergency services, banks, shops, international centers, and the like, may provide expatriates with the support upon arrival to a new city. Companies collaborating with other businesses can create a networking platform for their international workers by hosting workshops, seminars, and casual events to help foster a sense of community in a work environment while study abroad programs can do something similar with other schools and programs. In addition, schools and businesses that offer language learning and Mandarin practice can promote further immersion in an international experience.

Schools and businesses in China should consider the motivations attracting foreign candidates to their position and programs and should recognize the importance of those influences when projecting their marketing and development strategies. Although the aforementioned suggestions and strategies can be helpful, it is subjective and not conclusive. Study abroad programs and companies that sets aside time in hearing the interests and motivations of their foreign population and international students will have a better understanding of their expectations and needs. In knowing their interests and needs, schools and businesses in China can create applicable resources and platforms for development in their program model and business, and ensure a successful proactive environment for expatriates in China.

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Service Learning: Practicing What We Preach

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Abstract

In recent years, service learning has become the focus of curriculum design and implementation. Professors/teachers often include field experience in methods courses with the intent of guiding students through authentic experience, thus preparing students for seamless transfer from theory to practice. Service learning is a way to enrich and enhance courses through constructive/authentic experience. However, there is a lack of research that describes and encourages professors/teachers to “practice what they preach”. In other words, professors/teachers encourage service learning but do not participate in field experience opportunities themselves. This research presents an inside view of how one professor participated in service learning in international settings teaching English to very diverse audiences. This is a personal story with reflection of how “practicing what we preach” can develop into a more robust understanding of what students experience through “hands on, authentic” service learning experiences.

Keywords: service learning, English as a second language, field-experience, teaching abroad

Introduction

Service learning is a concept that is becoming more popular in the lives of students attending community colleges and universities. Central Washington University posits that the mantra of “Live’ Do’ Learn” is a perfect example of students’ call to responsibly participate in service learning, (Academic Service n.d.). Service learning as defined by the above said university would include participating in community service as well as reflecting on the quality and robustness of that service.

Service Learning as a component of course requirements and standards in higher education has grown in the last decade. Abes, Jackson, & Jones (2002) surveyed two hundred and fifty-two instructors who reported that they incorporate service learning into their teaching. Of those respondents, five factors influenced the implementation of service learning into class assignments and expectations. The first factor focused on increased student understanding of course material, the second, increased student personal development, the third, increased student understanding of social problems as systemic, the fourth, providing useful service in the community, and the fifth creating a university and community partnership.

Through an extensive meta-analysis of service learning research, Yorio & Ye (2012) found that service-learning enhanced a student’s understanding in three areas; personal insight, cognitive development, and understanding of social issues. In a similar research analysis, Celio, Durlak, & Dymnucki (2011) included 62 studies involving 11,837 participants who demonstrated that significant gains were made in self-esteem, perceptions towards education, civic engagement, social skills, and academic performance.

Eyler (2002) found that reflection towards service-learning experiences required an intentional and planned focus. She concluded that without reflection students often did not experience the full depth of what participation in service learning provided. She concluded that intentional focused reflection is a necessary component of effective service learning opportunities and must be included in the process through a planned, continuous procedure. Eyler asserted that just adding service-learning projects did not always result in students understanding the complex society in which they were involved.

Providing service to communities, gaining knowledge of a culture, and developing independence and improved self-efficacy are three of the goals of service learning. According to McKenna-Knight, Darby, Spingler, & Shafer (2011), academic service learning opportunities provide a bridge for students to develop theoretical knowledge and apply that into a deeper understanding of complex societal issues first hand. Eyler (2002) posits that service learning has grown in popularity over the past decade because it achieves not only academic goals but also personal fulfillment for individuals. In a similar vein, Baker (2000) agrees that service learning may heighten both personal and professional diversity, global awareness, and cultural competence.

Connecting students to real world experiences has long been the major goal of universities/schools who are community connected and strive to encourage service-learning opportunities for their students. Teaching to just “teach” seems futile and insignificant. What students can carry to the “real” world and implement is what matters. Service learning has often been a significant portion of the educational experience of most teacher-candidates. Field experience and student teaching generally consist of two semesters (or more) of the university requirements to become a teacher. The research gives evidence that service learning is a rewarding experience for teacher-candidates and may certainly enhance a variety of developing skills as teachers. However, lacking in the research are first-hand accounts of faculty who participate in service-learning opportunities themselves.

The focus of the remaining text will be to share the personal journey of the author who felt an ethical obligation to “practice what we preach”. Frequently educators become complacent and lackadaisical and forget how important it is to place ourselves in our “student’s shoes.” Our assignments reflect opportunities for service learning but in our personal lives we have forgotten the value of continuous learning and experiences for our own enhancement.

The following is to share my own experiences teaching English in language learning camps in South Korea and Montenegro during two separate summers. The six themes as documented by Pribbenow (2005) will be presented as a reflective and personal anecdotal perspective.

Literature Review

Researchers Miller, & Gonzalez (2010) compared the perspectives of teacher-candidates who participated in service learning in domestic and in international settings. The research concluded that the majority of the participants in both the domestic group and the abroad group reported that experience through service learning enhanced their knowledge of pedagogy, teaching strategies, and self-efficacy. However, significant gains were demonstrated in pedagogy enhancement within the international group, 77.1% vs. 57.6%. The second between group differences was in self-efficacy. The international group indicated that personal growth of understanding ones’ self and being flexible to the community in which they served was much higher than in the domestic group. The third, and final conclusion between groups was the evaluation of the service learning

opportunity as an overall experience. Again, the international group reported more satisfaction with the knowledge gained than that of the domestic group. Although both groups reported increased knowledge of course content, felt more prepared for future employment as educators, and demonstrated a deeper understanding of course content, the international group reported that they believed they had also added value to the host culture.

According to Walters, Garii, & Walters (2009) teaching in an international setting is not only valuable but also necessary to produce culturally competent educators. International placements often produce educators who are deeper reflectors, able to look at the world from a broader understanding, and have a greater appreciation for diversity in a classroom setting. With that said, it is obvious to most educators that the ethnicity of most classrooms is changing rapidly. Hodgkinson (2001) found that 65 percent of America's population growth in the next two decades will be "minority," particularly from Hispanic and Asian immigrants. The U.S. Census Bureau announced that Asians were the nation's fastest-growing race or ethnic group in 2012. Comparatively, the Hispanic population grew by 2.2 percent, or more than 1.1 million, to just over 53 million in 2012, representing about 17 percent of the total population. With the diversity of ethnicities in the classroom, Walters, Garii and Walters suggest that the global awareness and competence of educators must also change with that growth. They posit that international service learning opportunities will meet that need.

Many service-learning opportunities are implemented as a course requirement for either a university class or a high school class. Students are expected to spend from one-hour to 40 hours a week working in a setting where the theory that is represented in the class structure will be put into practice. The research has presented significant benefits for students. However, very few studies have investigated the positive effects on a community. Investigators Tyron, Stoeker, Martin, Seblonka, Hilgendorf, & Nellis, (2008) surveyed 21 organizations and found that thirty-eight percent of those organizations saw the value in course required service learning. Many of those organizations saw mentoring students as part of an organizational mission statement. Several stated that they needed the extra help even though the service learning students were participating for a short time, and would not continue past the semester's end. Several enjoyed and saw the value in partnering with educational institutions to help students become more knowledgeable and better informed about the community's possibilities and challenges.

Although service learning involves several education and community stakeholders, its' design and implementation is primarily the responsibility of educational staff and faculty. Bringle, Hatcher, & Games (1997) state that "because service learning represents curricular reform, it lives and dies with faculty, who play a key role in developing, implementing, and sustaining service learning within the academy." Pribbenow (2005) agrees that although there is better understanding of what service learning is, and what it can do for students, there is a lack of research concerning what service learning can do for faculty members. Pribbenow's findings conclude that six themes emerge when critically analyzing how service-learning influences a faculty members' understanding to teaching and learning. The six emerging themes were as follows; more meaningful engagement in and commitment to teaching, deeper connections and relationships with students as learners and individuals, enhanced knowledge of student learning processes and outcomes, increased use of constructivist teaching and learning approaches, improved communication of theoretical concepts, and greater involvement in a community of teachers and learners.

Methods

The research methodology was approached from an autoethnography view. Autoethnography is a way to document personal involvement that has been analyzed and pondered through personal reflection. Although not empirical in nature, autoethnography is an enriched and valuable research method that allows the researcher to experience and reflect upon a cultural opportunity engaging all of the human senses. It allows the investigator to be fully enveloped in a first hand experience. According to Jones (2005), autoethnography involves story telling- setting the scene, living “life” in an authentic way and relating that through a lens of realism to the reader. As Ellis and Bochner (2000) posit, autoethnography is a personal narrative, a research method that at the core is a reflection of life experience. To investigate what students experience could not be documented any other way. Frequently, those in higher education become so absorbed with scholarship, service, and teaching that the days of being a university student themselves has been long forgotten. Service learning gives the professor a chance to understand and reflect under the same conditions as their students.

A non-profit organization was chosen where the researcher had opportunity to teach English in two separate countries conducted over two separate summers. The organization was especially attractive because any profit from the cross cultural learning camps were appropriated towards the “Garden of Hope Home” an orphanage for impoverished children in Santa Barbara, Honduras (Smithgall, 2013). The organization offered a variety of locations to “volunteer” and made all necessary travel arrangements as well as provide curricula for the one or two week camps. Application and background checks were necessary to participate as well as self-funding for airfare, lodging, and meals. Included in exchange for the service was weekend touring of the country provided by knowledgeable guides.

Data Collection

Data sets included daily journal entries and reflective notes. Moreover, daily dialogue was conducted with other team members and an anecdotal diary was included in data collection.

Impressions of the cross cultural learner’s growth, the diversity of learners in each class, and interactions with their parents were a key focus of the data sets. Photographs were taken and chronologically filed so that visual data would also be accessible. A concluding data set included PowerPoint presentations, which were shown in the researchers home university to encourage faculty and staff to pursue service learning opportunities. Although this was not a sponsored activity through the researcher’s home university it was a venue to share insight into how students, faculty, and staff may benefit from service learning experiences. It was also a way to “practice what we preach” by personal involvement in “doing” what was recommended and espoused in the higher education community.

More Meaningful Engagement in and Commitment to Teaching

Imagine teaching students in a café/bar where a curtain separates the teaching area from the “bar”. Loud music, heavy cigarette smoke, and a cacophony of voices in several different languages compete for attention. Envision trying to teach the lyrics to the song, “You are my Sunshine” and thinking that your voice sounds “pretty good” to be politely asked to STOP because this kind of singing is not appropriate for a bar. That was my experience teaching students in Montenegro for a two-week cross cultural learners camp.

The students, ranging from five years of age to fifteen years of age were “summer” visitors to Montenegro from the Ukraine and Russia. They all spoke Russian with smatterings of multi levels of English. They all had the same goal- learn English or improve English in two weeks. A gargantuan endeavor!!

My empathy grew for the teacher candidates that I taught in the United States. By participating in this service-learning project, I had an authentic and “real” understanding for what teacher-candidates face in their first year of teaching in North America. Many would experience a somewhat similar experience to what I had experienced teaching abroad. For example, insufficient curriculum that was either not developed enough for the more knowledgeable learners, yet too intellectual for the beginners. As, it is with first year teachers, my free time was spent “re-creating” a supposedly ESL curriculum that would be appropriate in any ESL setting. First lesson learned; publishing companies are basically ignorant of the multi-tiered language abilities of students enrolled in an English as a Second Language classroom.

Paper was also a scarce resource. I found myself scrounging in the dumpster for food containers where I could salvage the “cardboard” so that I could develop vocabulary lists. After “brushing off” any food particles, and washing my hands after my daily “dumpster dive” my treasures were quite useful and effective even if the vocabulary words were framed with grease smatterings. First year teachers will also find themselves cutting out the backs of the cereal boxes on their breakfast table even before the box is empty.

The students themselves were delightful. They were respectful, appeared to be “listening” and showed amusement to my antics and pantomime lessons. I found that these students were especially skilled and adept at “copying” and repeating words. Unfortunately, a smile and a nod was not enough to show me that they understood the meaning. My statement of “yes you may go to the restroom” was met with a resounding and boisterous reinvention of the ABC song.

Rote learning seemed to be the modus operandi of what they had experienced in their schools at home. The students were afraid to “act out” the definition of a word and seemed to be much more comfortable standing at the side of the desk repeating a memorized definition and promptly sitting down. Competition is also a big factor among the students. I found that if one student excelled in the class then the others would follow in hot pursuit. If one stood up to recite an answer then the others followed, which inevitably led to a much lengthier lesson than what I had intended.

This experience caused me to reflect on more meaningful engagement and commitment to teaching my university students. In my teaching (teacher-candidates) was I really providing them with the best theory and pedagogy to tackle that first year with those ESL students with success? I had my doubts and did some “revamping” of my own with my presentations and how I “taught”. This practical experience was what I needed to reignite my passion for meaningful presentations and my commitment to provide the BEST for the students in the U.S. that I had the privilege of instructing.

Deeper Connections and Relationships With Students as Learners and Individuals

In a two-week intensive cross cultural learners camp, some might scoff and think that it is almost impossible to connect and build meaningful connections with students and families. Contrary to that thought, it is possible and very probable. With the use of social media, Snap- chat, Facebook, Google hangout, incredible connections are established. What was once a long-distance

relationship without substance can and with effort develop into lifelong relationships. I had definitely bonded with these students in the short weeks that I was with them. Exchanging E-mail addresses hugs and tears encompassed part of the closing ceremony.

I realized that teachers in the U.S. also had that opportunity with their students long after the pupils have advanced in their education. Through social media and electronic communication lifelong connections and relationships can be established. The advancement of technology in the twenty-first century has certainly made the world much smaller with one click at a time.

Many of the ESL students that I have taught over the years through various abroad experiences have grown up and have families of their own. They have graduated, obtained the jobs of their choice, married, and become parents. We are still connected as I interact with them on Facebook and keep abreast of what life has introduced them to. It is very pleasurable for me as a past “teacher” to see how they are using the education that I had a part in providing as they do “life”.

Enhanced Knowledge of Student Learning Processes and Outcomes

By participating in teaching abroad experiences I acknowledged firsthand that putting theory into practice is not an easy task. Writing the objectives on the whiteboard, (or on a grease smattered piece of cardboard) and having the students summarize what the objective will be for the lesson may be effective for English speakers but definitely not in most ESL situations. In my U.S. university classes I had hammered on the concept of sharing the objectives with the students’ ad

nauseam to my teacher candidates. In multiple class sessions I had stated, “if the students cannot tell you what they are learning and why they are learning it- then they are not learning”.

My ESL students could not read the board, had difficulty saying “my name is” much less telling me what the objective of the lesson was that I intended to teach them. I soon realized that theory is absolutely culture and language level inclusive. After my service learning experience I made a decision about my own teaching mantra. As I teach my university students about best practice and how to enhance student learning I will now say “it depends”. In teaching any class anything, one size certainly DOES NOT fit all. Always take the culture, ethnicity and language level ability of the students into consideration before trying to design a lesson that will excite and enable them to become impassioned about what you are teaching them.

Increased Use of Constructivist Teaching and Learning Approaches

I have always taught with a constructivist mindset. My teaching career began with teaching kindergarten in a rural and ethnically diverse community. I have always had the opinion that most university students have the attention span of about twenty minutes. Therefore my foundation anchored in teaching kindergarten has been a corner stone in my approach to instructing university students.

I have always prepared my lectures in a format that promotes “I talk, you talk, you move, I talk, you talk, you move” kind of presentation. Every twenty minutes I try to change the focus. I found that this worked very well with the ESL students. I had some daily entry tasks as they all arrived at various times in a fifteen-minute span. Entry tasks might be as simple as drawing a picture of a family and labeling the members in English. For the beginners I had vocabulary words focusing on family members posted in the classroom. Learning vocabulary, understanding vocabulary

definitions, and using the vocabulary in expressive communication was the focus of the entirety of the lessons. For example, the lesson on clothing items led to a competitive relay race with the students racing each other to put on various jackets, caps, shoes, and then racing back to touch a teammate who would repeat the process. These types of “movement” games were very entertaining and helped the students transfer the vocabulary to “real” life.

I reflected on how often I made sure that the concepts I taught my university students transferred to “real classrooms”. I already required service learning and classroom field experience and now considered ways to improve and implement more of those opportunities for my U.S. students. Service learning takes significant devotedness from the instructor who must make the connections with the community and then follow-up with community members to make sure that the experience is a positive one for all stakeholders. I reminded myself that because of the importance of transferable knowledge to authentic classrooms that service learning opportunities could not be regarded as optional. Because of my own service learning experiences I rededicated my quest to provide my U.S. students with an abundance of field experience opportunities not only in local communities but also abroad.

Improved Communication of Theoretical Concepts

The literature has established that service learning provides university students with greater understanding and appreciation for the foundational theories that they are exploring in the formal educational setting. Cortes (2008) states that service learning is not necessarily a panacea for all of the difficulties that higher education faces but it is an excellent way to match theory with pragmatism. The same can be said for faculty who participate in service-learning opportunities.

By teaching English abroad I too experienced what a first year teacher experiences in a diverse classroom, teaching students with varied levels of English proficiency. No longer would I face my U.S. students and give the illusion that if they only read the textbook and applied the theories to their upcoming first year teaching job that all would be well.

In my own teaching I realized that even at the university level I have many students with varying levels of cognitive abilities and language proficiency. Many students are the first in their family to attend a university. Some come from rural communities where their high school writing classes did not equip them for the scholarly authorship that is required to do well at the university level. Moreover, the “language” spoken in the home does not reflect the level of English proficiency expected in a higher education setting.

I started to analyze my current practice. My ponderings led me to the conclusion that breaking down assignments into small “doable” chunks and spending more time on my “standards” and requirements would benefit my students. I reflected that if students do not have a grasp on the expectations of the class then they wouldn’t be able to reach the goal line with success. I noted that a re-design was in order to develop curricula that had time embedded in each session to go over detailed information of the standards and expectations. Additionally, teaching my students *how* instead of expecting them to *know*.

Greater Involvement in a Community of Teachers and Learners

Greater involvement in the community requires three sets of stakeholders. Initially, the students themselves and their willingness to volunteer in the community must be acknowledged as a major

piece of the triangle. The students must be willing to put in the hard work required to bring theory to fruition. Haynes (2006) posits that the millennial students of today feel empowered as agents of social change. Service in the community is the bridge that connects the isolated classroom to the world at large. Service learning is the conduit of social change. The community members are the vertices showing trust in students and allowing them to participate in a business or organization. The students are expected to perform with superiority so that clients are the beneficiaries.

The university is the third vertices gaining notoriety and publicity through the students' efforts. If the vertices are not congruent, each participating with equal measures then the foundation is corrupted and the pieces crumble with all three participants at a loss. Working in an authentic "real life" situation also connects faculty and students with a team-like camaraderie. A "*we are in this together*" attitude is formed, bonding members of the team together. John Maxwell, a distinguished author could not have said it better, "*to collaborative team members, completing one another is more important than competing with one another.*"

I found that the university students working along side me were like my family. We experienced and appreciated the frustrations and joys that teaching can bring. Pribbenow (2005) asserted that faculty members who felt isolated and open hostility in the work setting found that participating in service learning allowed them to see each other with different perspectives, appreciating strengths and weaknesses and allowing colleagues to be themselves. Returning to the more formal halls of the university after participating in service learning strengthens a staff to recommit the time and energy that is necessary to meet the challenges of educating students. Colleagues who once felt isolated and marginalized felt a renewed vigor when returning to the university (Pribbenow, 2005). Students also share a similar reflection when performing in teams to serve the community. Cortes (2008) found that students reached higher levels on Blooms Taxonomy and produced a higher quality of project when working in teams in a service learning project.

Conclusion

Service learning offers an excellent way of combining theory and practical experience into deeper, richer, and more invigorating opportunities that benefit all stakeholders. The students themselves gain valuable knowledge in applying the varied theoretical concepts they are learning within the walls of the formal instructional institution. The community gains the expertise of an individual, or groups of individuals who are applying the latest research, and technological advances. The university/school gains "free advertising" of the programs their institution offers, and notoriety in the scholars that they have produced. It is definitely a win-win situation for all stakeholders.

Even though service learning is part of the curricula in several institutions, there is very little research on faculty/professors/teachers who actually participate in service learning opportunities themselves. In the previous pages I have represented myself as a professor who found that actively being engaged in service learning enabled me to build a sharper and more positive image, experience a deeper knowledge base of what my students experience, and a realization and renewed commitment to the students that I instruct.

I realized through being in the "trenches" myself what a first year teacher experiences. I realized that some of my tried and true standards for the classroom were not practical. I realized that every situation and opportunity is different and that "know thy students" must be the mantra for the individual experiencing their first year teaching. I developed an appreciation for a culture that was not my own and the experience of being a guest in someone else's country. I also realized why

more instructors do not create service learning opportunities for their students. It is a commitment with preplanning and follow up essential for it to be effective. Additionally, many instructors have not been interested in participating themselves, thus limiting their perspective on the value. Lastly, service learning is not always viewed as an endeavor that is worthy of accolades through an institutions structure of tenure and post tenure review. Because of that and the time and commitment that is required by instructors, service learning is not always given the appropriate focus that it deserves. As mentioned before service learning is not a panacea. Although it may not fit every instructor or course, it certainly was beneficial for me. By practicing what I was espousing in my instruction to my U.S. teacher candidates I improved my own teaching, understanding of another's perspective through developing global competency, and improved my self-efficacy. Providing service learning opportunities and participating in them is well worth the effort and brings many surprising benefits.

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Part 10: Pre K-12

Designing and Implementing Effective Responsive and Collaborative Services for LGBTQ Students

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Abstract

Research suggests that there is significant growth in the number of K-12 students who are identifying as LGBTQ. Despite efforts to increase the awareness of the needs of this student population, many LGBTQ students feel that they are still invisible and underserved within their school communities. In addition to feeling isolated and neglected, a large percentage of LGBTQ students report verbal and physical harassment while their academic performance and feelings of self-worth are negatively impacted (GLSEN, 2008). Findings from previous studies suggest that there is a strong positive relationship between identifying as LGBTQ and substance abuse, suicidal ideations, suicide attempts, and rejection from friends and families (Chung, Szymanski, & Amadio, 2006; Goodenow, 2008; Poteat, 2008).

Keywords: LGBTQ students, physical harassment, substance abuse, suicide attempts

Introduction

Adding to the current dilemmas, many educational professionals are not prepared with adequate professional development to help meet the needs of their LGBTQ students. The purpose of this paper is to examine methods and strategies that can be utilized within K-12 educational settings that will better prepare educational professionals to understand and address the challenges facing the LGBTQ population. Educators have a professional and ethical obligation to address the needs of this population as individuals, to advocate for them collectively, and to engage systemic change in schools to facilitate healthy academic and emotional development for LGBTQ students (Goodrich & Luke, 2009).

Toward the goal of improving conditions for the LGBTQ population in our nations' schools, it is important for educational policymakers, administrators, and practitioners to collaborate, design, and implement an effective responsive services program for LGBTQ students that includes curriculum planning, counseling and support systems for students, and professional development activities for all educational professionals and support staff.

To facilitate this discussion among the participants of this roundtable discussion, the following questions will be presented:

To address the feelings of isolation, invisibility, and unacceptance, in addition to school safety and security issues expressed by many LGBTQ students, how can our nations' schools be transformed to better meet the needs of this student population?

A major component of this type of transformation relies on adequate training of all whom come into contact with LGBTQ youth. Consequently, what types of professional development activities are necessary to ensure that educational administrators, teachers, counselors, and support staff will be prepared to meet the academic and non-academic needs of the LGBTQ students?

Literature Review

There is a preponderance of evidence from recent studies that effectively illustrates the difficulties LGBTQ students encounter on a daily basis within their school environments. In a nationwide survey, over 86 percent of lesbian, gay, bisexual, and transgender (LGBT) students reported verbal harassment at school. Over 44 percent of all LGBT youth reported being physically harassed at school because of their sexual orientation while over 30 percent of LGBT youth reported physical attacks because of their gender identity or gender expression (Kosciw, J. G., Diaz, E. M., and Greytak, E. A. 2008). More than 80 percent of LGBT students of color in one survey were verbally harassed in school because of their sexual orientation. More than half of Native American LGBT students (54 percent) experienced physical violence because of their sexual orientation, and substantial percentages of African American (33 percent), Latino/a (45 percent), Asian/Pacific Islander (41 percent) and multiracial (45 percent) students also reported these experiences. The consequences of physical and verbal abuse directed at LGBT students include truancy, dropping out of school, poor grades, and having to repeat a grade (Kosciw, J. G., Diaz, E. M. 2009). One study showed that of LGBT youth, 32 percent reported missing a class and 33 percent reported missing a day of school in the past month because they felt unsafe at their school (Kosciw, J. G., Diaz, E. M., and Greytak, E. A. 2008).

In addition to the school safety and security concerns, LGBTQ students are more likely to experience significant negative impacts on academic performance and their emotional well-being. Those who experienced more frequent harassment had grade point averages half a grade lower than those who were harassed less frequently (Kosciw, J. G., Diaz, E. M., and Greytak, E. A., 2008). Transgender students who experienced high levels of harassment had significantly lower grade point averages than those who experienced lower levels of harassment (verbal harassment based on sexual orientation: 2.2. vs. 3.0; gender expression: 2.3 vs. 2.8; gender: 2.2 vs. 2.7) (Greytak, E. A., Kosciw, J. G., and Diaz, E. M., 2009). Additionally, LGBTQ youth are twice as likely as their heterosexual peers to report depression and more than twice as likely to attempt suicide (Russell ST, Joyner K., 2001). In a Washington state study, those students that suffered from depression were almost twice as likely to be at academic risk than were their peers who did not experience depression (Dilley J. Research Review, 2009). LGBTQ students who are depressed are also more likely to turn to drugs and alcohol as a coping mechanism. Studies of high school students found that those who suffered harassment because of their real or perceived sexual orientation were more likely than non-harassed youth to use crack cocaine, cocaine, anabolic steroids, and inhalants (California Safe Schools Coalition, 2004). Data from the YRBS administered in Chicago public schools suggests that LGBT students are subject to differential rates of school absence, physical violence, sexual assault, depression, and drug use (Chicago Public High Schools, 2005).

When examining the negative impacts on LGBTQ students' academic success and emotional well-being, it is also important to consider the challenges facing youth of color in our nations' schools. One study found that African American same-sex attracted youth were more likely to have low self-esteem and experience suicidal thoughts than their counterparts of other ethnicities. African American same-sex attracted young men were also more likely to be depressed (Consolacion et al, 2004). In many Latino communities, machismo and Catholicism contribute to homophobic attitudes that hamper efforts to reach Latino gay and bisexual youth with HIV prevention information (Harawa NT et al. 2004). Asian American and Pacific Islander GLBTQ youth often feel that they have shamed their families when they diverge from cultural expectations to marry and have children (Garofalo R et al., 2006).

Given the overwhelming evidence that has surfaced from numerous studies throughout the past several decades, it has become apparent that the aforementioned perceptions of the LGBTQ community about being isolated and neglected are well-founded and rather emphatically illustrate the fact that the needs of many in this community are not being met by traditional education programs. To address the feelings of isolation, invisibility, and unacceptance, in addition to school safety and security issues expressed by many LGBTQ students, how can our nations' schools be transformed to better meet the needs of this student population?

Responsibility of Educators to LGBTQ Students

Educators are very aware of the importance of providing a safe and supportive environment for all students. Without a secure atmosphere within the school, it is very difficult for students to attend on a regular basis and become successful in their coursework and/or standardized testing upon which the success of the schools is often measured. In its national report on the status of underserved groups in education, the National Education Association proclaimed that “We do believe, however, that education employees, regardless of their beliefs or views about homosexuality or gender nonconformity, share a commitment to the well-being of their students and a solidarity with their fellow colleagues. We also believe that education employees share a commitment to bedrock constitutional principles that apply to every public school in the country. These include the protection of freedom of speech and expression and the guarantee of equal protection under the law for all people” (Kim, et.al., 2009).

While some may believe that the responsibility of responding to and meeting the needs of LGBT students is an issue that should be dealt with by school counselors, social workers, and school psychologists, the reality is that all adult members of the school community, including administrators, classroom teachers, coaches, education support professionals who supervise and interact with students, and parents—can serve as powerful allies to LGBTQ students. Educational policymakers and leaders need to approach the challenges facing LGBTQ students from a systemic approach as opposed to assigning responsibility to a relatively small portion of the school community.

Currently there is little research on many aspects of LGBTQ issues in education as well as a lack of awareness among schools of existing research. In addition, many school districts have developed and implemented few or no policy initiatives relating to LGBTQ issues. According to the NEA report, “the existence of school district policies that specifically define and prohibit bullying, discrimination, and harassment based on sexual orientation and gender identity or expression improves school safety, whereas generic anti-bullying or anti-discrimination policies do little to help those who are GLBT or perceived as GLBT” (Kim, et.al., 2009).

To further complicate the problem of not meeting the needs of this underserved population, the vast majority of American schools do not include LGBTQ related materials in classroom instruction, despite evidence to support classroom curricula has been shown to improve youths' feelings of safety and belonging (Kim, et.al., 2009).

To illustrate the importance of systemic change regarding the issues facing the LGBTQ student population, there are numerous studies that clearly demonstrate the benefit of affirming and protective school environments for LGBT youth mental health. Students living in states with enumerated anti-bullying laws that include sexual orientation and gender identity report less

homophobic victimization and harassment than do students who attend schools in states without these protections (Kull, et al. 2014).

Findings from current research also demonstrates that LGBT-focused policy and inclusive curriculums are associated with better psychological adjustment for LGBT students (Black et al. 2012). Regarding the adoption of curricula, LGBT-inclusive curriculums introduce specific historical events, persons, and information about the LGBT community into student learning (Snapp, et.al, 2015) and have been shown to improve students' sense of safety (Toomey et al. 2012) and feelings of acceptance and to reduce victimization in schools (Kosciw et. al., 2012).

It is also important to note that professional development for administrators, faculty and staff is a crucial component of transforming schools to become a more supportive environment for LGBTQ students. LGBTQ-specific training for teachers, staff, and administrators fosters understanding and empathy for LGBT students and is associated with more frequent adult intervention in biased-based bullying (Greytak et al. 2013, Greytak & Kosciw 2014).

If educational policymakers and administrators are serious about transforming school environments to better meet the needs of LGBTQ students by providing responsive and collaborative services, an understanding and awareness of the findings from the plethora of studies conducted within the last decade is paramount.

Effective Interventions to Address the Needs of the LGBTQ Population

Although most educators would agree that the LGBTQ student population is still largely underserved, there is evidence to support the effectiveness of various policies, strategies and programs that have been implemented systemically to help transform school environments to help LGBTQ student. Nearly all studies examining LGBTQ bullying and harassment have found that comprehensive anti-discrimination and anti-harassment policies that specifically protect gay, lesbian, bisexual and transgender students and staff from bullying and harassment are not only effective but necessary (California Safe Schools Coalition, 2004; GLSEN , 2008). School systems that develop and implement non-specific anti-bullying policies are not sufficient; policies should specifically define and prohibit bullying and harassment on account of sexual orientation and gender identity or expression. Additionally, policies should be published to all members of the community in basic language and should also be visible by posting them in common areas throughout the school campus.

One particularly effective strategy that schools can implement to protect LGBTQ students from peer victimization is to create what are called Safe Spaces. GLSEN (2008) described a Safe Space as a place that is welcoming, supportive, and safe for LGBTQ students. Safe Spaces should be easily identifiable (i.e., Safe Space stickers, posters, LGBTQ supportive materials) so that LGBT students will know who their allies are and where to go to when they need support and safety. In essence, Safe Space allies should be adults and peers who are knowledgeable about LGBTQ issues and provide support, education, and advocacy for students who identify as LGBTQ.

In addition to creating safe and secure places within the school environment, there is a growing body of evidence to support the effectiveness of the inclusion of Gay/Straight Alliance (GSA) student organizations. Peer influence among youth in schools cannot be powerful: Students tend to listen to each other and follow each other's lead. Therefore, student engagement is an important component necessary to address homophobia, transphobia and other LGBTQ issues in our schools.

The thousands of peer-led organizations that exist in the U.S. schools, such as GSAs, are often effective forums for student engagement. Studies show that GSAs are effective not merely because of their activities, but by their very presence (Goodenow, et.al., 2008) The presence of GSAs has a large impact on students' feeling of threat as well as their truancy and suicide attempts. For schools that have a GSA, they were about as third as likely to be threatened or injured at school and were less than half as likely to have made a suicide attempt. Based on findings from research, students don't even have to belong; just the existence of the organization makes a difference and "affects the whole tenor of the school." The GSA serves as an automatic center for finding people and resources on LGBTQ issues (Goodenow et.al., 2008). Moreover, the presence of GSAs appears to positively impact staff in schools generally even if the staff members do not participate directly in the GSA. More than 40 percent of the professional staff in schools with GSAs would be very comfortable in assisting a student with LGBTQ related questions, in contrast with 29 percent of the staff in schools without GSAs. Thirty-nine percent of the professional staff in schools without GSAs indicated never hearing positive or supportive comments about lesbian and gay people among the faculty/staff, in contrast, with just 23 percent of the staff in schools with GSAs (Szalacha, 2008).

Another important intervention necessary to meet the needs of LGBTQ students is the development of curricula that can be taught collaboratively by teachers, counselors, and administrators. Many studies show that inclusion of LGBTQ issues in the school curriculum improves students' health, safety and performance in school (Goodenow, Kosciw, and Russell, 2008, California Safe Schools Coalition 2004, Massachusetts Youth Risk Behavior Survey 2007). According to University of Illinois at Chicago Professor Laura Szalacha, school personnel also recognize the importance of curricula: In a survey of school personnel in California, Minnesota and Massachusetts, school personnel cited "lesson plans and materials" as their top need with respect to addressing GLBT issues in school (Szalacha, 2008).

Although the need for curricula has been recognized, LGBTQ issues are rarely systematically included in any formal curriculum in U.S. public school education. A primary reason for the dearth of information presented to students traces back to the textbook "adoption" process, which tends to strip textbooks of any content that could be perceived as "controversial" in any region of the nation (Szalacha, 2008). School personnel are often hesitant to address any LGBTQ topics that may arise in classroom discussions, and have not been given adequate professional development to feel confident in their ability to broach such topics. Other practical constraints on school counselors and teachers include the lack of time, resources and authority to cover topics not specifically included in high-stakes tests mandated by state and federal law. Consequently, school personnel lack clarity over what LGBTQ-related materials they may introduce to students, in what contexts, and how to cover such materials in age-appropriate ways. Based on the response from surveys of school personnel nationwide, the need for designing and implementing effective LGBTQ curricula and professional development is becoming recognized and prioritized (Kim, et.al., 2009).

Despite the lack of existing curricula, there are some effective school-based LGBTQ affirmative interventions that have demonstrated positive results. California and Massachusetts have led the United States in efforts on behalf of LGBTQ students with the establishment, in the 1980s, of the Los Angeles Unified School District Project 10 and the formation of a gay-straight alliance (GSA) group in Boston (Fetner & Kush, 2008). Subsequently, the Safe Schools Program for Gay and Lesbian Students was established by the Massachusetts Board of Education in 1993; the Gay, Lesbian & Straight Education Network was established in 1995 as a national organization (taking

this name in 1997); and the national Gay–Straight Alliance Network (GSA Network) was established in San Francisco in 1998 (Meyer & Bayer, 2013). According to the GLSEN website, there are currently over 6,500 GSA organizations in our nations’ schools today (GLSEN, 2017).

The primary missions of GSA organizations are to provide LGBTQ students with adult and peer support, and to increase awareness and sensitivity of staff and students about LGBTQ people and developing school policies that protect LGBTQ students from harassment, violence, and discrimination. By sponsoring social events and initiating changes in schools that enhance understanding of and reduce stigma, prejudice, and hostility toward sexual minority students, club members and advocates become united in their efforts to create a safe environment for all. The GSA Network’s mission is to (1) create safe environments in schools for students to support each other and learn about homophobia, transphobia, and other oppressions; (2) educate the school community about homophobia, transphobia, gender identity, and sexual orientation issues; and (3) fight discrimination, harassment, and violence in schools (Meyer & Bayer, 2013).

Although there are no definitive studies, such as randomized clinical trials, of the efficacy and effectiveness of school-based interventions to reduce anti-LGBTQ prejudice, evidence that such interventions such as the formation of GSA organizations is quite robust. Research has been conducted in different states and locales, utilizing a variety of methodologies. These studies consistently indicate that school-based responsive and collaborative interventions have been successful at improving school environments—including reduced dating violence, threats, and violence, and increased sense of safety by LGBT youths—and improving health and educational outcomes, such as reducing truancy, injuries at school, and suicide attempts (Goodenow C, Szalacha L, Westheimer K, 2006; Burdge H, Snapp S, Laub, 2013; Hatzenbuehler ML, 2011). For example, several studies have shown that disparities in suicide attempts between sexual minority and cisgender heterosexual students were significantly lower in regions that had a more LGBT-supportive environment than in regions that did not (Hatzenbuehler ML, 2011; Hatzenbuehler ML, Birkett M, Van Wagenen A, Meyer, 2014). Successful results were also evidenced in qualitative studies. LGBTQ students who were exposed to LGBTQ-affirmative school-based interventions reported the positive impact of such programs on their well-being and academic success (Burdge H, Snapp S, Laub C, Russell ST, Moody R., 2013). In one study of LGBT youths recruited from college and university organizations for LGBT students, researchers found that LGBT youths who had attended a high school with a GSA had significantly more favorable outcomes related to school experiences, alcohol use, and psychological distress than similar LGB youths who had attended a high school without a GSA (Heck NC, Flentje A, Cochran BN, 2011). Furthermore, a study of an anti-bullying intervention in the general, albeit not specific LGBTQ population, has shown that such interventions also have cost benefits related to reduced health care utilization, decreased rates of children leaving schools or placed in alternative settings, and decreased school dropout rates (Highmark Foundation, 2013).

Despite the success of GSAs in many schools nationally, not all GSAs are welcomed by all students and schools. The existence of GSAs varies by district and region. While many GSAs do exist in rural or suburban districts, for some, “gay-straight alliances [are] a faraway dream, something that happened at good suburban schools or in places like New York City or San Francisco” (Gentry-Fernandez Summit, 2008). Because GSAs exist in public, peer-dominated spaces—and because of the differences in students’ comfort levels and identification with their sexual orientation and gender identity—it may be challenging for GSAs to serve all students, instead of students of a particular race, ethnicity, gender, sexual orientation, or other social group (McCready, 2008).

In addition to including school-based support groups for the LGBTQ community, the professional development of faculty and staff has shown to reap positive benefits. Many faculty and staff members feel woefully unprepared to navigate the challenges in working with LGBTQ students and fear the potential consequences of saying or doing something that may be considered controversial or a violation of employee protocol (Kim, et.al., 2009). To help alleviate school personnel anxieties, educational policymakers and administrators should take a proactive stance in designing and implementing successful professional development programs

The Illinois Safe Schools Alliance (formerly CESO) recommends taking the following steps to maximize in-service training in schools (Greytak, 2008):

- Incorporate local information into the training—for example, what the school policies and procedures are.
- Prioritize the obligation (whether professional, legal or moral) that school personnel have in creating safe learning environments for all students.
- Acknowledge the diversity of views regarding sexual orientation to create a space for staff to negotiate how their own personal beliefs will comport with their professional role.
- 4. Include the most up-to-date research on GLBT youth, using local data where possible

For more comprehensive preparation, the NEA Safety, Bias and GLBT Issues Training Program contains several key components in one or more of its training modules:

- Ground rules or operating norms
- Explanation of GLBT terms
- Distinguishing professional role from personal or private religious beliefs or values
- Contextual information: why GLBT issues relate to student health, safety and achievement
- Statistics on bullying, harassment, discrimination
- Activities and discussion on bias, stereotypes and myths about GLBT people
- Activities on connection between sexual orientation and gender/gender identity/gender expression
- Videos on bullying and diversity
- Demonstration on lessons and activities for the classroom
- Responding to community concerns
- Legal considerations
- Resources for school employees
- Creating an action plan (Kim, et.al., 2009)

The findings from the aforementioned studies clearly emphasize the importance and need for school-based responsive and collaborative services and targeted professional development designed to address the specific needs and challenges facing the LGBTQ community. Consistent with all professional development programs, evaluation of effectiveness is of utmost importance to ensure that the needs of the LGBTQ population are being addressed and met.

Obstacles Facing LGBTQ Responsive and Collaborative Services

Despite the mounting evidence to support that there is a need to improve LGBTQ responsive and collaborative services, there is also strong opposition coming from many different perspectives. Most schools have students who are either identify as LGBTQ or have parents who are gay, so the needs of those students is difficult to overlook and ignore. Typically there are three major reasons why schools are not including LGBTQ curriculum and professional development to faculty and staff. These primary reasons are:

- Reluctant Administrators – Without clear direction, many teachers and school counselors are hesitant to discuss LGBTQ issues with students or using curriculum that includes LGBTQ related topics because they fear that their administrators will not support them. Until systemic change is made, it will be a long time before the mindset of educational administrators across the county will change.
- Parent opposition – Depending on the demographics, there are small groups of parents in some districts, and large groups of parents in other districts who do not want their children, and any other children, exposed to LGBTQ related topics being discussed in school. School leaders and teachers have seen parents pull their children from when schools participate in the “Day of Silence” and other similar programs that are designed to bring an awareness to the LGBTQ community. Some parents bring their own values into the public school setting and want schools to abide by those values. Teachers do not want to upset parents and tend not to test the waters of LGBTQ topics in their classroom if they feel that parents will oppose and their administrators will not be supportive. While some districts have moved forward with systemic changes in policy, curriculum, and professional development, many have chosen to avoid the potential controversy
- Lack of knowledge systemically- Many teachers and educational leaders have not been provided with adequate coursework and/or professional development that would lead to a level of comfort in working with students on LGBTQ issues. With the terminology within the LGBTQ community frequently changing and more students becoming comfortable coming out, the need for further education for faculty, staff, and students has become increasingly apparent. The most important place to begin is with school board policies and student codes of conduct that stipulate discipline for students who harass and bully based on sexual orientation and gender expression. They also need to be clearly written to support the use of LGBTQ topics in classrooms. Policies, codes of conduct, and transparency set the foundation for supporting teachers and leaders when there is parent opposition. Interestingly, they also provide parents of LGBTQ students support and guidance for when administrators may be unaware or not follow district policy. After policies and codes of conduct are in place, the introduction of LGBTQ curriculum and professional development for faculty and staff can begin.

Adding to the difficulty of transforming school environments nationally, there are still a number of states that strictly prohibit educator from discussing LGBTQ issues. GLSEN continually tracks negative laws that may harm or stigmatize LGBTQ students. One example of such laws are "no promo homo" laws, local or state education laws that expressly forbid teachers from discussing gay and transgender issues (including sexual health and HIV/AIDS awareness) in a positive light-if at all. Some laws even require that teachers actively portray LGBTQ people in a negative or inaccurate way. These statutes only serve to further stigmatize LGBTQ students by providing K-12 students false, misleading, or incomplete information about LGBTQ people. There are currently

7 states that have these types of laws: Alabama, Arizona, Louisiana, Mississippi, Oklahoma, South Carolina, and Texas (GLSEN website). Regardless of whether or not school personnel feel comfortable in discussing LGBTQ issues with students, the potential disciplinary action for those who would consider discussing these topics is a major deterrent.

Conclusions

Based on a review of the literature regarding the experience of LGBTQ students in our nations' schools, every day schools have students in this community who enter through the main doors and they don't feel safe when they're there. The Gay, Lesbian, Straight Education Network's (GLSEN) 2013 School Climate Survey, reported the following statistics:

School Safety

- 55.5% of LGBT students felt unsafe at school because of their sexual orientation, and 37.8% because of their gender expression.
- 30.3% of LGBT students missed at least one entire day of school in the past month because they felt unsafe or uncomfortable, and over a tenth (10.6%) missed four or more days in the past month.
- Over a third avoided gender-segregated spaces in school because they felt unsafe or uncomfortable (bathrooms: 35.4%, locker rooms: 35.3%).
- Most reported avoiding school functions and extracurricular activities (68.1% and 61.2%, respectively) because they felt unsafe or uncomfortable.

Harassment and Assault at School

- 74.1% of LGBT students were verbally harassed (e.g., called names or threatened) in the past year because of their sexual orientation and 55.2% because of their gender expression.
- 36.2% were physically harassed (e.g., pushed or shoved) in the past year because of their sexual orientation and 22.7% because of their gender expression.
- 16.5% were physically assaulted (e.g., punched, kicked, injured with a weapon) in the past year because of their sexual orientation and 11.4% because of their gender expression.
- 49.0% of LGBT students experienced electronic harassment in the past year (e.g., via text messenger postings on Facebook), often known as cyberbullying.
- 56.7% of LGBT students who were harassed or assaulted in school did not report the incident to school staff, most commonly because they doubted that effective intervention would occur or the situation could become worse if reported.
- 61.6% of the students who did report an incident said that school staff did nothing in response.

Given these alarming statistics, educational policymakers and administrators can no longer ignore the fact that the needs of the LGBTQ population are not being met in our schools. While systemic change and school transformation are never easy to navigate, the time for change is long overdue. There is no blanket solution or "one size fits all" approach; rather it is of utmost importance for each school community to assess its needs by seeking input from students, parents, teachers, counselors, policymakers, administrators and community partners. By giving the LGBTQ community and its advocates a voice, programs can be designed and implemented that will directly address the primary needs of this community, and provide all students with a safe and secure

environment. This transformation process will need to include the development of specific policies that will ensure a safe and secure environment, followed by adequate professional development for administrators, teachers, counselors, and staff. To reach the students directly, age appropriate LGBTQ curricula needs to be designed and delivered by knowledgeable professionals, and information regarding the curricula presented to parents in a transparent and expeditious manner. In addition, clubs and organizations similar to the aforementioned Gay-Straight Alliance need to be offered and supported by adults within and outside of the school community. These systemic changes will take some time to yield significant results in students' perceptions of safety, belonging, and acceptance, but the realization that the school community has listened to and responded to their concerns should have an immediate impact on their emotional well-being.

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Part 11: Research Methods in Education

Confirmatory Factor Analysis of Second Language Writing Anxiety Inventory

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Abstract

This study investigated the possibility of applying Cheng's Second Language Writing Anxiety Inventory (SLWAI) to the English language learners at middle schools in China. The data were collected from two middle schools. There were 160 participants in total with 86 male students (53.75%) and 74 female students (46.25%). Cheng's Second Language Writing Anxiety Inventory (SLWAI) is a three-dimensional self-reported measure of second language writing anxiety that agrees to most anxiety researchers' recognition of anxiety as a complex multi-dimensional phenomenon. Cronbach's alphas of each subscale and total scale were calculated to ensure the internal consistency reliability of the measure. Confirmatory Factor Analysis (CFA) was also conducted to measure the construct validity of the instrument. The results demonstrated that SLWAI can be applied to middle school students in China; however, some modifications, such as correlating similar wording items and making the statements less affirmative for middle schoolers to comprehend, are suggested and should be considered.

Keywords: confirmatory factor analysis, English language learners, second language writing anxiety

Introduction

Second language (L2) researchers (E. Horwitz, M. Horwitz & Cope, 1986; Krashen, 1982; Leary & Kowalski, 1995; Sparks & Ganschow, 1991) have been aware that anxiety is often associated with foreign language learning and anxiety is normally considered as one of the factors that affect language learning. Gardner and MacIntyre (1993) defined language anxiety as the fear or apprehension experienced by a learner who is expected to use a second language or foreign language. E. Horwitz, M. Horwitz, and Cope (1986) conceived foreign language anxiety (FLA) as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128). Amid many L2 learners, writing skill is the most challenging and crucial of the four language skills, in part because writing requires L2 learners to endeavor to align their writing output with systematic coherence, socio-linguistic protocols, and prescribed instruction and in part because writing involves complex syntactic structures with appropriate reasoning and logic. In addition, writing is an inevitable component in foreign language learning, and the majority of researchers believe that language writing anxiety hinders foreign language writing performances. Elizabeth (2004) argued that writing is so important for learning to happen that without writing, language learning remains incomplete (p. 295). Cheng (2002) asserted that "writing is an emotional as well as cognitive activity, that is, we think and feel while we are writing" (p. 647). This, apparently, reveals that the interplay between writing anxiety and writing performance requires more attention from L2 researchers exploring not only the linguistic dimension, but the psycho-cognitive dimension in L2 writing, which coincides with Petzel and Wenzel's (1993) assertion that writing process is not merely a linguistic endeavor, but also a complex psycho-social activity.

Literature Review

To facilitate systematic investigation of second language writing anxiety, Cheng's (2004) Second Language Writing Anxiety Inventory (SLWAI) was developed to as a research and diagnostic tool. Cheng believes that "the multidimensional nature of the SLWAI makes it possible to investigate the relationships between different facets of L2 writing anxiety and aspects of writing performance and practices, using the three subscales" (p. 331).

In addition, Cheng's SLWAI, considered as a three-dimensional self-report measure of second language writing anxiety, confirms to most anxiety researchers' recognition of anxiety as a complex multi-dimensional phenomenon. In Cheng's study, factor analysis was employed to help with item selection and the construction of subscales that reflect three commonly accepted dimensions of anxiety: Cognitive Anxiety, Somatic Anxiety, and Avoidance Behavioral Anxiety.

Cheng's initial SLWAI validation study sample included 421 freshman English majors enrolled in English writing courses at seven different colleges in Taiwan. Among them, 336 (79.81%) were females and 59 (14.01%) were males, with 26 (6.18%) participants not specifying their gender. They were asked to complete the SLWAI twice with an interval of 2 or 3 weeks.

The SLWAI contained 22 items grading on a 5-Likert scale. The overall Cronbach's alpha was calculated, yielding a reliability estimate of .91 for both administrations of the scale. Cronbach's alpha was also calculated for each of the three subscales. The Cronbach's alpha of the first and second administrations for the Somatic Anxiety subscale were .87 and .88, for the Avoidance Behavior subscale were .85 and .88, and for Cognitive Anxiety subscale were .82 and .83. Test-retest reliability estimates of the three subscales were also calculated: .82 was for the Somatic Anxiety subscale, .83 was for the Avoidance Behavior subscale, and .81 was for the Cognitive Anxiety subscale. Exploratory Factor Analysis (EFA) was employed with the 22 items from SLWAI (final version) and the 10 items from the English Writing Self-efficacy Scale to examine whether or not the items on the SLWAI were distinguishable from beliefs about ability to write in Second Language (L2). The results revealed that no writing anxiety item from the SLWAI loaded on the self-efficacy factor and no self-efficacy item loaded on any writing anxiety factor. Correlation analysis between the SLWAI (also the three subscales) and other anxiety-related measures (English Writing Apprehension/Attitude Test, English Writing Block Questionnaire, English Use Anxiety Scale, English Classroom Anxiety Scale, Test Anxiety Scale, Personal Report of Communication Apprehension-College Scale, Math Anxiety Scale, State Anxiety Scale) were also conducted to examine the convergent and discriminant validity of the 22-item SLWAI. According to Cheng, the results have provided preliminary evidence that the total scale and subscales of the SLWAI had good internal consistency reliability, acceptable test-retest reliability, satisfactory construct validity, and adequate criterion-related validity.

Nonetheless, it is worth noting that since the SLWAI was developed based on a sample of first-year college students majoring in English as a Foreign Language (EFL), more research should be conducted to assess the psychometric properties of the SLWAI with non-EFL majors or with students at a lower or higher educational level. Moreover, another limitation of Cheng's study lies in that the sample predominantly consisted of female students, so it is necessary to verify the results of this measure in samples of a more balanced male-female ratio.

The purpose of our study is to investigate the possibility of applying the Second Language Writing Anxiety Inventory (SLWAI) to English language learners at middle schools in China. The survey

(SLWAI) and two demographic questions consisting of age and gender were administered to 160 middle school students. Two middle school English teachers from two different schools helped us to distribute the questionnaire to 160 students in Grade 7 (in China, Grade 1 to 6 are elementary school, and Grade 7 to 9 are middle school). Confirmatory Factor Analysis was employed to examine the validity and reliability of the whole scale as well as three subscales of Second Language Writing Anxiety Inventory (SLWAI).

Methods

Participants

Convenience sampling was used in this study. Participants were 160 seventh graders from two public middle schools from different provinces in China. The total sample consisted of 86 male students (53.75%) and 74 female students (46.25%). There was no statistically significant difference between two schools' students on the demographic characteristics.

Procedure

SLWAI and two demographic questions (age and gender) were administered by two middle school teachers to their students ($n=160$). The result of the survey would not affect students' academic records. Completion time of the questionnaire was approximately 20 minutes.

Instrument

The SLWAI is a 22-item self-report questionnaire that measures three subscales: Somatic Anxiety (Q2, Q6, Q8, Q11, Q13, Q15, Q19), Avoidance Behavior (Q4, Q5, Q10, Q12, Q16, Q18, Q22), and Cognitive Anxiety (Q1, Q3, Q7, Q9, Q14, Q17, Q20, Q20). The item of questionnaire is scored on a 5-point response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Seven items (Q1, Q4, Q7, Q17, Q18, Q21, Q22) are negatively worded and the scores were reversed before the researchers conduct the statistical analysis.

Statistical Analysis

Based on Cheng's prior research, this instrument is a multidimensional model (three subscales). Confirmatory factor analysis (CFA) was conducted to evaluate the three-factor model underlying the SLWAI via Mplus 7.4. Cronbach's alphas and item-total correlations were calculated via SPSS version 22.0 to assess the internal consistency reliability. Normality of the items' scores was investigated. There was no severe violation of normality: Skewness values ranging from .975 to -.687, and kurtosis values ranging from .091 to -1.1198.

In Confirmatory factor analysis, the fit of the model was investigated using chi-square test. However, many existing literatures (see Bentler & Bonnet, 1980; Hooper, Coughlan & Mullen, 2008; Kenny & McCoach, 2003) have suggested the limitations of the chi-square fit statistic as a criterion for model fit. To avoid potential drawbacks of alternative measures, multiple indices including Comparative Fit Index (CFI), Tucker Lewis index, Root Mean Squared Error of Approximation (RMSEA), and Standardized Root Mean Residuals (SRMR) were utilized to assess model fit in this study. A good model fit requires the values for CFI and TLI are equal or greater than 0.95, the SRMR value is less than .08, and the RMSEA is less than .06 (Hu & Bentler, 1999). In addition, multiple factors will affect the interpretation of model fit. The values of the CFI and

TLI ranging from .9 to .95 may indicate the model fit is acceptable (Brown, 2006). The model was identified by using maximum likelihood ratio and setting the first factor loading to 1.0. Since the students in the same class are taught by the same teacher, students from the same class were set as clustered data.

Findings

The amount of missing data was small: 98.12% of the sample completed the questionnaire and 1.88% missed 1 item. Therefore, pairwise deletion method within Mplus 7.4. was adopted to handle the missing data by removing the missing value for the analysis.

Internal Consistency

Means, standard deviations, and correlations for the 22 items are presented in Table 1. The Cronbach's alphas, means, and standard deviations for each subscale are presented in Table 2. The Cronbach's alpha for the whole scale is .895, and the estimates of Cronbach's alpha for each subscale are .827, .831, and .703, which demonstrate that overall SLWAI scale and each subscale are internally consistent. 20 out of 22 items (except for Item 17 and Item 21) with adequate item-to-total correlation ($>.4$) in SLWAI indicate that those items are measuring the same construct.

Table 1. Mean, Standard Deviations, and Item-to-total Correlation Used in SLWAI-Revised (N=160)

Item	Mean	SD	I-T r	Skewness	Kurtosis
1. While writing in English, I'm not nervous at all.	2.62	1.186	.483	.503	-.414
2. I feel my heart pounding when I write English compositions under time constraint.	2.78	1.334	.385	.201	-1.174
3. While writing English compositions, I feel worried and uneasy if I know they will be evaluated.	2.63	1.344	.619	.448	-.969
4. I often choose to write down my thoughts in English.	3.82	1.143	.441	-.687	-.322
5. I usually do my best to avoid writing English compositions.	2.61	1.346	.616	.358	1.091
6. My mind often goes blank when I start to work on an English composition.	2.65	1.428	.634	.430	-1.138
7. I don't worry that my English compositions are a lot worse than others.	3.22	1.341	.399	-.087	-1.198
8. I tremble or perspire when I write English compositions under time pressure.	2.21	1.266	.525	.873	-.238
9. If my English composition is to be evaluated, I would worry about getting a very poor grade.	3.41	1.324	.542	-.483	-.951
10. I do my best to avoid situations in which I have to write in English.	2.89	1.279	.633	.195	-1.017
11. My thoughts become jumbled when I write English compositions under time constraint.	2.73	1.377	.677	.393	-1.083
12. Unless I have no choice, I would not use English to write composition.	3.14	1.353	.623	-.161	-1.171
13. I often feel panic when I write English compositions under time constraint.	2.28	1.228	.615	.606	-.741
14. I'm afraid that other students would deride my English composition if they read it.	2.51	1.322	.504	.477	-1.014
15. I freeze up when unexpectedly asked to write English compositions.	2.20	1.248	.576	.931	-.076
16. I would do my best to excuse myself if asked to write English compositions.	2.16	1.238	.492	.975	.000
17. I don't worry at all about what other people would think of my English compositions.	3.41	1.178	.075	-.556	-.398
18. I usually seek every possible chance to write English compositions outside of class.	3.51	1.158	.447	-.296	-.735
19. I usually feel my whole body rigid and tense when I write English compositions.	2.13	1.137	.561	.896	.091
20. I'm afraid of my English composition being chosen as a sample to be discussed in class.	2.86	1.475	.474	.156	-1.378
21. I'm not afraid at all that my English compositions would be rated as very poor.	3.28	1.356	.195	-.310	-1.084
22. Whenever possible, I would use English to write compositions.	3.72	1.111	.463	-.482	-.496

Note. SD = Standard Deviation; I-T r = item-to-total correlation.

Table 2. Reliability, Means, and Standard Deviations-Revised (N=160)

Factor	SLWAI factors	No. of items	α	M	SD
F1	Somatic	7	.827*	2.429	1.291
F2	Avoidance	7	.831*	3.122	1.236
F3	Cognitive	8	.703*	2.993	1.319
Cronbach's alpha (total scale)		.895*			

Note. SLWAI = Second Language Writing Anxiety Inventory;
 α = Cronbach's Alpha; M = mean; SD = standard deviation.

* $p < .001$

Confirmatory Factor Analysis (CFA)

A preliminary Confirmatory factor analysis (CFA) of the three-factor model was estimated using Mplus version 7.4. The model was identified by setting the first factor loading to 1.0, and parameters were estimated using maximum likelihood estimation. There were two models tested. Model 1 was constructed based on the original SLWAI in which each item was loaded on their corresponding subscales. By reviewing the items in each subscales, the researchers found that some items are worded similarly. Brown (2006) argues that the error terms of items with similar wording could be correlated to improve model fit. Thus, in Model 2, the researchers correlated the errors of Item 11 with Item 2, Item 15 with Item 2, Item 19 with Item 2, Item 11 with Item 6, Item 15 with Item 6, and Item 16 with Item 5.

The results of Model 1 and Model 2, which represent the original SLWAI and SLWAI with modifications respectively are presented in Table 3. For Model 1, chi-square (206, N=160) = 356.767, CFI = .885, TLI = .871, RMSEA = .068, and SRMR = .079. While for Model 2, chi-square (200, N=160) = 299.988, CFI = .924, TLI = .912, RMSEA = .056, and SRMR = .075. By comparing both chi-square value between two models and other model fit indices (CFI, TLI, RSMEA, and SRMR), Model 2 was chosen over Model 1. Figure 1 shows the confirmatory factor analysis model with modifications. The item loadings for each item are acceptable except Item 17 (0.026) and Item 21 (0.291).

Table 3. Confirmatory Factor Analysis Results for the SLWAI (N=160)

Model	χ^2	Df	CFI	TLI	SRMR	RMSEA
Model 1	356.767*	206	.885	.871	.079	.068
Model 2	299.988*	200	.924	.912	.075	.056

Note. Model 1 = Original CFA model without modification; Model 2 = CFA model with errors correlated; χ^2 = Chi-Square; df = degree of freedom; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; SRMR = standardized root mean square residual; RMSEA = root mean square error approximation; CI = confidence interval.

* $p < .001$

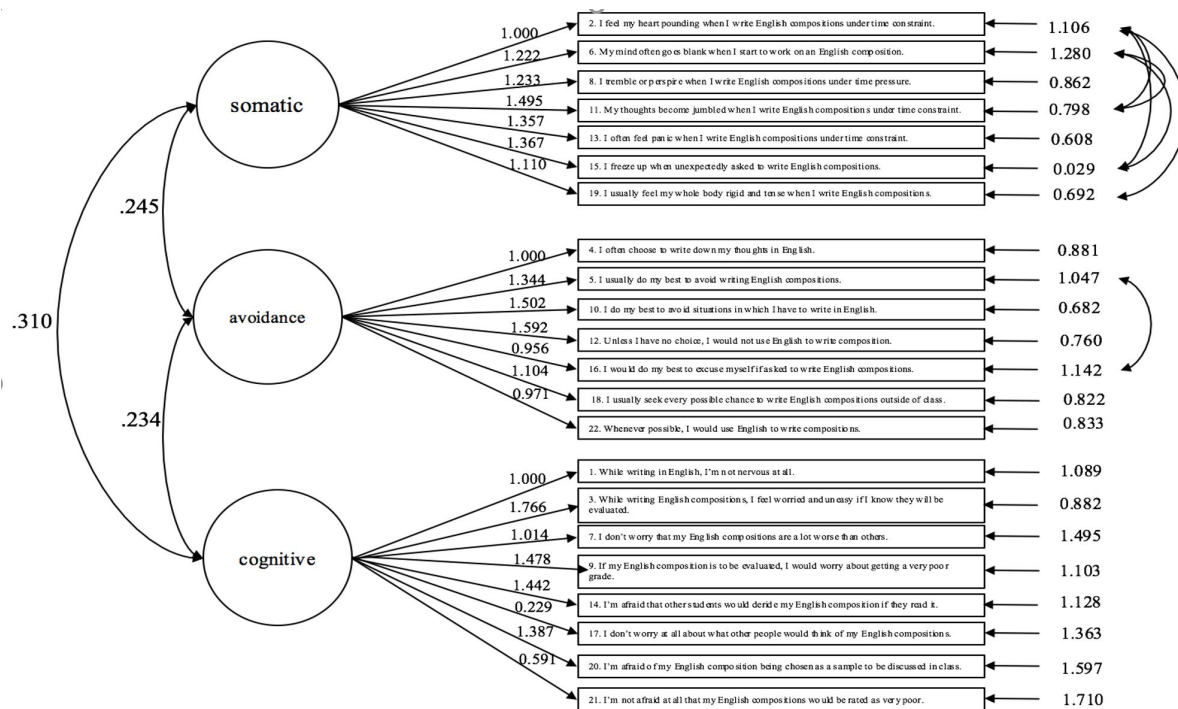


Figure 1. Confirmatory factor analysis model

Discussion

This study was designed to examine whether or not the Second Language Writing Anxiety Scale (SLWAI) is applicable to the English language learners in middle schools in China by conducting confirmatory factor analysis. Results of this study demonstrate that the total scale and the subscales of the SLWAI had good internal consistency reliability and acceptable overall model fit, though some modification was conducted to reach good levels of model fit (by correlating errors of Item 11 with Item 2, Item 15 with Item 2, Item 19 with Item 2, Item 11 with Item 6, and Item 15 with Item 6, and Item 16 with Item 5).

The researchers found out that Item 11, “My thoughts become jumbled when I write English compositions under time constraint),” Item 15 “I freeze up when unexpectedly asked to write English compositions,” and Item 19, “I usually feel my whole body rigid and tense when I write English compositions” are worded similarly to Item 2, “I feel my heart pounding when I write English compositions under time constraint” both in English and Chinese. Therefore, the researchers correlated the errors of Item 11, Item 15, and Item 19 with Item 2 which leads to better model fit. Moreover, the CFA initial results also suggested the researchers correlate the errors of Item 11, “My thoughts become jumbled when I write English compositions under time constraint) and Item 15, “I freeze up when unexpectedly asked to write English compositions” with Item 6, “My mind often goes blank when I start to work on an English composition”, and the errors of Item 16, “I would do my best to excuse myself if asked to write English compositions” with Item 5, “I usually do my best to avoid writing English compositions.” The results with those item errors’ correlation also lead to a better model fit.

There is a notable finding that Item 17, “I don’t worry at all about what other people would think of my English compositions” and Item 21, “I’m not afraid at all that my English compositions would be rated as very poor” with “not...at all” indicating strong affirmation have relatively low

item-total correlation (.075 and .195) and low item loading (0.229 and 0.591). Considering the psycho-cognitive level of 7th graders who tend to be less confident and certain towards their stances, the sentence structure stated as “not...at all” might lead to a failure in understanding statements with strong affirmation. Therefore, SLWAI needs to be administered with caution to younger English learners who do not have strong confidence nor the tendency to fully affirm some stances presented.

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