

TEACHING CULTURALLY DIVERSE STUDENTS FROM INTERNATIONAL
SCHOOLS: WHAT ONLINE EDUCATORS HAVE TO SAY

By

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ABSTRACT

This study is designed to discover how online teachers use technology to reach their multicultural international school students. Interviews of twelve international school online teachers were conducted. The topics for the interviews focused on the technology-based strategies that teachers use to meet the needs of multicultural students. The results showed that the tools used by online teachers for international secondary schools closely matched the uses of tools recommended in the literature. Sometimes, however, course design limited the choices teachers were allowed to make regarding tools for supporting students' multiple ways of learning and for encouraging discussion and collaboration. The results of the study will help online teachers reflect upon the effectiveness of their current strategies for connecting with international school students despite cultural differences. It will also serve as a foundation for determining best practices.

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CHAPTER 1: THE NEED FOR THE STUDY

Introduction

The need for online education is a being discussed at many international schools (International Baccalaureate Organization [IBO], 2007; Saunders, 2006). In what is likely the largest survey of its kind, the International Baccalaureate Organization (IBO) extracted the opinions from 887 program coordinators at International Baccalaureate (IB) World secondary schools regarding the coordinators' interest in online education programs at their schools. The survey reported that 70% of program coordinators believe that online courses would expand the range of course offerings at their school. Additionally, 51% agreed it would help students develop intercultural understanding (IBO, 2007).

According to the IBO study (2007), program coordinators believe online education can expand access to remote students, increase course offerings, and develop intercultural understanding. While these reasons for pursuing online education are similar for both international and national schools (Stevens, 2008), the circumstances are somewhat different: international schools often enroll students from complicated cultural backgrounds.

Allan (2002) describes how the multiple cultures are interrelated in an international school. Students bring their home cultures to school where they are met with the influences of the school culture, which is in turn influenced by the majority students'

culture and the predominant culture of the faculty. All of this is set within the host country's culture. In addition, there is a high turnover in student population and diversity within international schools. Students are in constant contact with a steadily changing range of other cultures (Snowball, 2009). Allan's theory of interrelated cultures within international schools is echoed in the work of others in the field (Grimshaw & Sears, 2008; Heyward, 2002; Hill, 2006; Poore, 2005).

A closer look at the international school students' cultures shows that they belong in one of three cultural groups (Stobart, 1989, quoted in Hayden & Thomas, 1995): (1) nationals, (2) national immigrant (including refugees), and (3) internationally mobile. National students belong to the host country. They could also be called "locals" if a broad definition of the term is allowed. The term immigrant refers to students who have moved to the host country without plans to leave. And lastly, the internationally mobile students, also called "global nomads" have come to the host country for a short period, after which they will either return to their home country or move elsewhere. This group tends to have a more fluid sense of cultural identity (Grimshaw & Sears, 2008).

Under these circumstances, an online teacher becomes more "distant" due to the rather extreme cultural differences. In many cases, the online teacher does not live in the beneficiary school's host country, and has not experienced in person the unique culture of the beneficiary school. Snowball (2009) claims that an understanding of both school cultures and host country culture is important for international teachers to promote intercultural understanding. International school teachers need an understanding of the wide range of cultural values that their students possess, and be aware of the cultural blending that often occurs in multicultural groups (Astill & Keeves, 1999).

Statement of the Problem

International schools follow either an international standard of education or a national standard that is being offered in a different country. The teachers are generally native speakers of the school's language. They are located all around the world and were originally conceived to give children from immigrant or transitional families an alternative to local schools. However, more and more wealthy locals are enrolling their children in international schools. The multicultural environment of international schools presents definite challenges for these teachers. Online teachers of international schools are faced with even more cultural challenges because they cannot experience the intricately interrelated cultures of the students' schools and host countries. They must connect with their students despite the cultural differences. There is a need to identify technology-based strategies that will aid teachers to effectively connect with these diverse students.

The Purpose of the Study

This study investigated how online teachers that provide courses to international schools use technology to connect with their multicultural students. In particular, what methods and techniques are they using to promote intercultural understanding among students, and what technology-based strategies are employed to support the students' multiple ways of thinking and learning which are influenced by their cultural biases and frames of reference?

Few studies were uncovered that involve both online teachers and international school students. Most of what has been studied with regard to culture and online learning deals with university-aged students, and the research done with respect to international

school students deals primary with brick and mortar classes. Thus, in order to identify how online teachers are teaching multicultural, international school students, this study has been conducted to establish the current practices among these teachers.

Interviews of online teachers for international secondary schools were conducted to determine current practices. The interviews were conducted, analyzed, and placed in context of existing literature. The following questions were asked and explored.

Describe the tools you use to individualize instruction.

- What tools do you use to encourage learning despite differences between your teaching style and the teaching style the students are familiar with?
- What tools do you use to support students' multiple ways of learning?

How do you promote intercultural understanding among your students?

- How do you use technological tools (forums, chat, email, video conferencing, wikis, social networks, etc.) to discuss and collaborate?
- Do you use any particular tools to incorporate culturally-relevant content for your students?
- Do students discuss and share personal experiences? What media do they use?
- Do you encourage your students to participate in any culturally-rich online communities outside the "classroom"? What tools are used?

Limitations

Studying teaching practices invites a few challenges. The limitations inherent in this study include the following:

- Limited sample size and the sampling method

- Differing responses to technology for students of different ages and maturity levels
- Self-reported responses from teachers
- Non-uniform access to technological tools for teaching and learning
- Unequal skill in the use of technological tools for teaching and learning
- Unequal awareness to cultural differences among teachers and students

Due to these limitations, a set of delimitations were selected to improve control over the study and increase the trustworthiness of the results.

Delimitations

The delimitations established for this study help to improve the trustworthiness and replicability of the study. The interviews were conducted with online teachers who offer courses to students of accredited English-speaking international secondary schools.

The grade level was limited to reduce the variance of age-related responses to the various techniques implemented by the teacher, therefore this study only interviewed educators who taught students in the last two years of pre-college school (referred to as secondary school in this thesis).

Definition of Terms

The following terms have been defined for the purpose of this study.

Culture: the beliefs, values, and behaviors with which a particular group identifies.

Cultural identity: the culture or group of cultures with which an individual identifies him or herself.

Cultural blending: the evolution of a culture due to its close contact with one or more other cultures: particularly the tendency of a person from one culture to exhibit characteristics of another culture.

English-speaking international school: an English-speaking internationally-minded school following either an international standard of education or a national standard being offered in a country other than its origin.

Immigrant student: a student holding a passport of one country who has a long-term or permanent residence in a foreign country.

Intercultural understanding: mindfulness of and sensitivity to the beliefs, values, and traditions held by other cultures.

Learning styles: the way in which information is perceived and processed. In this thesis, the term “learning style” refers to the culturally-grounded methods for learning.

Migrant student: a student holding a passport of one country who takes up short-term or temporary residence in a foreign country.

National school: a public or private school that follows the national curriculum of the country in which it is located.

National student: a student that holds a passport from the international school’s host country.

Online education: a formal learning environment in which the teacher instructs students through the communication medium of the Internet.

Secondary school: the final four years before university. The ages and school years of these students will vary depending on which curricular system their school subscribes to, but students will generally be between fourteen and eighteen years old.

Social presence: the extent to which a person represents himself or herself as a "real person" in an online environment.

Significance of the Study

This study revealed current practices for connecting with multicultural students. A literature review has revealed suggestions for teaching similar learners in national schools, and more extensively in universities. But little is known of the efforts of online teachers to reach the uniquely multicultural students of international schools. This study begins to fill this gap by analyzing how online teachers use technology to teach multicultural students belonging to international schools. The study will serve as a record of current practices, and a basis for determining best practices.

CHAPTER 2: LITERATURE REVIEW

Introduction

Growth of International Schools

Brummitt (2007) defined an English-speaking international school as follows: a school that “teaches wholly or partially in English outside an English speaking country. Language schools are not included” (p. 35). He excludes schools in countries like India, for example, where English is an extensively used language in academia. However, his definition includes schools that teach a national curriculum and cater to a particular nation’s culture like an overseas American school.

Using this definition, Brummitt (2007) cites the growth of international schools worldwide:

- In April 2000, there were 1,701 international schools.
- In April 2007, there were 4,179 international schools.
- By 2020, there will be an estimated 9,000 international schools.

The number of international school teachers is conservatively estimated to reach 303,000 in 2020: up from 154,000 in 2007.

For some international schools, including those aligned with the International Baccalaureate Organization (IBO) (Bunnell, 2008), a well-known international curriculum, online learning is seen as a way to keep up with the ongoing growth (IBO, 2007; Saunders, 2006).

While the need for online education among international schools is apparent, there is little reported about the overall growth of online education among international schools.

Multicultural Students

International school students can be classified into three categories: national, immigrant, and internationally mobile (Stobart, 1989, quoted in Hayden & Thomas, 1995). Although it is sometimes difficult to determine a “national” from “international” student (Hill, 2006), in general, national students are classified as citizens of the host country, while international and immigrant students carry a passport from a different country. Immigrants take up a long-term or permanent residence in the host country.

Internationally mobile students are a well-documented group also known as “third culture kids” (Useem & Downie, 1976), or “global nomads” (McLachlan, 2007; Zilber, 2004). They live for a significant amount of time outside their passport country, or country of origin, during their school years (McLachlan, 2007). Their stints abroad range in intensity. Some students spend a few years in a foreign country only to return immediately to their passport country. Others move from country to country, and in some cases never return “home” to their passport country.

This internationally mobile group adds to the complexity of the multicultural setting of international schools because those who have spent little or no time in their “home” country tend to lack a strong cultural identity with that country. Instead, their cultural identity undergoes cultural blending. In other words, their culture lies somewhere between their home culture and the host country(ies) cultures (Grimshaw & Sears, 2008). The literature contains several articles describing the challenges faced by this group,

particularly regarding identity negotiation (Grimshaw & Sears, 2008) and developing a sense of belonging (McLachlan, 2007).

Within the international schools, subcultures develop where two or more cultures overlap. For example, imagine a school's host country is China, but the school's culture is American, and German students dominate the student population. The German students' cultural identities differ significantly from students in their home country because of the cultural influences of the host country and the school cultures (Allen, 2002).

In the past, international schools were dominated by students from internationally mobile families who were trying to reduce the impact of their overseas life on the education of their children (Fry, 2007). However, with the present-day emphasis on globalization and intercultural understanding (Deveney, 2007; Hayden & Thomson, 1995; James, 2005; Teekens, 2003), the international school demographics have shifted and now include a significant number of wealthy local students who enroll for the opportunity to learn intercultural skills and an internationally recognized language (Hanchanlash, 2004, Hill, 2006). Brummitt (2007) expects these wealthy locals to dominate international school enrollment in the future.

Intercultural Understanding

Most international schools endeavor to teach their students intercultural understanding (Allan, 2002; Heyward, 2002; Poore, 2005), a concept that is taught across subjects. Intercultural understanding is sensitivity to and appreciation of other cultures' practices, attitudes, values, and beliefs (Heyward, 2002). Hofstede and Hofstede (2005) compare these aspects of culture to the layers in an onion. The outermost layers are

labeled “practices” and consist of attitudes, actions, language, etc. These superficial cultural characteristics are the highly susceptible to outside influence, and change frequently. The deepest layers, “values,” are the culture’s fundamental beliefs. They are far less malleable (Hofstede & Hofstede, 2005).

Sensitivity to differences in communication, language, and culture within a multicultural group can improve social interaction (Hamilton & Woodard-Kron, 2010). Heyward (2004) developed a model that depicts the levels and dimensions of building intercultural understanding. He describes the advancement into intercultural understanding as it relates to an individual's awareness, competencies, attitudes, participation, and language.

Developing an awareness of other cultures begins with an acquaintance with the superficial expressions of the culture. One may know of the festivals, foods, fashions, and flags, but these just represent the surface of an iceberg of cultural attributes (Snowball, 2009). Beneath the surface are an individual’s roles in society, the use of body language, motivation for behaviors, and concept of right and wrong (Hofstede & Hofstede, 2005; Snowball, 2009). An individual at the most developed level of Heyward's model would know of the cultures' social structures, traditions, and values from an insider's perspective (2004).

Heyward (2004) describes several general competencies important to intercultural understanding. At the highest level of intercultural understanding, a person would exhibit the ability to show tolerance, the ability to avoid judgment, the capacity to show concern for others, and would have a talent for flexibility. The intercultural competencies assist a person in transitioning smoothly between cultures. They empower one to work and live

amid different cultures. He emphasizes that these are perspective-altering skills that can be learned and applied in daily social interactions. While important and frequently associated with culture-related discussions, these competencies can only lead to intercultural understanding when in conjunction with the appropriate cultural understanding, attitudes, involvement, and language skill.

The appropriate attitudes for intercultural understanding begin with a curiosity and interest in a different culture, followed by a sense of deep respect, and climaxing in a sense of belonging to the new cultural group (Heyward, 2004).

Participation in a new culture begins with second-hand experiences with the different culture through books, news stories, and movies, and evolves into the most intense form of participation: a life embedded in the culture where work and social activities take place through the channels of the new culture (Heyward, 2004). Immigrant and internationally mobile students and teachers in international schools have an exceptional opportunity to enhance their level of intercultural participation because of the school's location within a different culture. Teachers can encourage interaction with the host country's culture to improve intercultural understanding (Jackson, 2005). In order to best understand their multicultural students, teachers need to assimilate themselves into the culture surrounding the school (Snowball, 2009).

The last dimension of Heyward's (2004) model for intercultural understanding is language acquisition. It is reasonable to imagine that the ability to speak a culture's language increases the extent to which one can participate in that culture. Ezra (2003) argues that language is critical to understanding a culture: it is the means by which values and ideas are conveyed.

The enveloping nature of the host country's culture can result in a penetrating development of intercultural understanding (Heyward, 2002; Jackson, 2005). Using the rich host culture's environment, international schools have a unique opportunity to advance their students' understanding through increased awareness, development of competencies, adjustment of attitudes, opportunities for participation, and authentic practice of language skills.

In one study, students were asked to design a learning activity that would engage them in the surrounding culture. Some students chose to attend local dance classes, others, became involved in cultural festivals. Students reported an increase in intercultural understanding because of the experiences, challenges, and opportunities to which they were exposed (Krajewski, 2011).

Other researchers add that students can increase their cultural understanding through authentic involvement with the local culture. International school students can work together with students from local schools (Jackson, 2005; Krajewski, 2011) or with retired members of the local community (Jackson, 2005) on collaborative projects, community service, or tutoring. Teachers should structure such activities to involve community members and students in equal-status rules (Heyward, 2002).

Newly arrived students may be at a disadvantage in reference to local-community involvement because of their inexperience in the culture and language. It is recommended that a cultural mediator help direct the new student through the initial levels of awareness, competencies, attitudes, participation, and language acquisition (Heyward, 2002).

It is also recommended that intercultural understanding be taught within the school community as an integrated element of the curriculum (Field, 2010; Heyward 2002; Hill, 2006). In one example, music is used to highlight and celebrate cultural differences without the limiting and, at times, biasing use of words (Field, 2010). Others found peer-to-peer interactions among students effective (Allan, 2003). Students work cooperatively to prepare and give group presentations (Krajewski, 2011) and share personal stories through formal story telling (Sermeno, 2011).

Training teachers and students to reach the highest levels of intercultural understanding for multiple cultures, which includes full immersion in the culture and highly developed language skills, would be impractical for most teachers. Snowball (2009) recommends that international school teachers reach a moderate level of intercultural understanding. Teachers should become generally aware of the elements of cultures, they should learn about and develop their understanding of the main cultural influences on their students, and they should immerse themselves in the host country's culture.

International schools that adopt online learning should train online teachers to develop intercultural understanding in themselves (Heyward, 2002; Monthienvichienchai, Bhibulbhanuwat, Kasemsuk, & Speece, 2002; Snowball, 2009), and to foster it in their students.

Online Multicultural Experiences

When it comes to online learning, the literature describes multicultural students experiencing difficulties adapting to the teaching and assessment styles of the teacher, interacting with their peers and teachers, grasping the relevance of mono-culturally

related content, and feeling culturally misunderstood (Erichsen & Bolliger, 2011; Hamilton & Woodard-Kron, 2010; Liu, Liu, Lee, & Magjaka, 2010; Snowball, 2009; Tapanes, Smith, & White, 2009).

Teachers are viewed and treated differently by different cultures (Chui, 2009). Teachers in different cultures also have vastly different styles of teaching and assessing. The spectrum ranges from aloof, distant endower of information to comrade, partner, facilitator of learning (Sadykova & Dautermann, 2009; Liu et al., 2010; Yang, Olesova, & Richardson, 2010; Yildiz & Bichelmeyer, 2003). Students who are familiar with one of these types of relationships can have difficulty understanding the expectations and the boundaries of a different student-teacher relationship.

Interaction and collaboration among multicultural groups of students can challenge students to familiarize themselves with another culture (Krajewski, 2011). Interaction and collaboration can also foster the expression of alternate perspectives and strengths. In an online classroom, however, other challenges can arise. Feelings of isolation have been expressed by international students (Erichsen & Bolliger, 2011). Additionally, religious and work-based scheduling problems from students' home cultures can conflict with students' scheduling requirements outside class.

Content selection can also significantly impact learning for multicultural groups of students. Teachers tend to emphasize content that is familiar to them (Liu et al., 2010). Students who are unfamiliar with the complex histories and relationships in which the content is embedded can have a disadvantage. Teachers who select content from a variety of cultural perspectives may be more successful.

As discussed earlier, it is important for teachers to develop an adequate level of cultural understanding. The success of an online course can be negatively impacted by the differences between the teacher and students (Hamilton & Woodard-Kron, 2010). Students who feel that their teacher does not understand their cultural experiences can feel that the cultural gap between them is distractingly large (Tapanes et al., 2009). Teachers can reduce that gap by following the advice from the literature to understand the general attributes of cultures and to learn about the major cultures to which their students belong (Snowball, 2009). Lack of adequate cultural understanding is the root of most of the difficulties that follow.

Technology-Based Teaching Strategies to Minimize the Impact of Cultural Differences

The cultural differences within a multicultural online classroom can be great, but researchers have outlined recommendations for successfully accommodating multiple cultures and languages in online settings.

When designing teaching strategies for multicultural students, Parrish and Linder-VanBerschot (2010) recommend that the designer (a) consider the cultural differences between the students and the teacher in order to accommodate the students' learning styles and backgrounds, (b) evaluate their own cultural preferences with regard to what is universally accepted as truth and what is culture-specific, (c) identify the students' cultural values to determine the students' cultural foundation, (d) prepare to promote intercultural understanding and respect students' backgrounds, and (e) realize that research-based teaching methods are biased by the culture of the author.

The media used for sharing and communicating should be driven by the appropriate stimuli. Researchers (Laud & Mathew, 2007; Volet & Wosnizta, 2004)

suggest aligning each technology-based teaching strategy with one or more of the following criteria by asking: Does the technology-based teaching strategy (a) support course objectives (i.e. students can locate and discuss relevant issues with an expert in the field through video conferencing), (b) enable social interaction (i.e., students can be required to write about their day-to-day activities to a student in a different country through email messages), (c) address multiple intelligences (i.e., students can use music composition software to compose a song with lyrics that relate to the course objectives), and (d) encourage intercultural understanding (i.e., a digital storytelling assignment can require students to narrate a story of their cultural heritage and illustrate it with a slideshow of photos)?

There has been little research done on the technology tools used in online international schools. Therefore, the technology-based strategies for multicultural students, as delineated in the literature, are primarily recommendations for university-level students. It is foreseeable that these strategies also play a role in teaching multicultural international school students.

Coordinating Teaching and Learning Styles

Recently, the idea that teachers should cater to students' different learning styles has lost credibility (Pashler, McDaniel, Rohrer, & Bjork, 2009; Rohrer & Pashler, 2012). However, the learning styles referenced in the literature on the subject of culturally-influenced learning styles and intercultural online classrooms are not the traditional learning styles (i.e., visual, auditory, kinesthetic). Instead, they are methods of teaching and learning that stem from the practices in a person's community or culture. For example, in some cultures, students are reluctant to ask questions or offer unique ideas in

public (Yang et al., 2010). The different perspectives can lead to problems of miscommunications and misunderstandings that arise from differences in the styles, or methods, of teaching and learning (i.e., reserved students may be surprised to learn of low participation grades) (Liu et al., 2010; McLoughlin, 1999; Sadykova & Dautermann, 2009; Ujitani & Volet, 2008; Volet & Wosnizta, 2004; Yildiz & Bichelmeyer, 2003). So, while learning styles have fallen from favor, the different methods for learning and teaching can still lead to complications in a multicultural online class.

Cultures differ in their view of the teacher as the source of knowledge, a facilitator, or something in between (Liu et al., 2010; Yildiz & Bichelmeyer, 2003). Western cultures tend to have open, conversation-like teaching styles. Students are encouraged to question and offer their original ideas (Liu et al., 2010). In contrast, in many eastern cultures, the teacher is viewed as a walking textbook (Yildiz & Bichelmeyer, 2003). The teacher gives the students the relevant information and the student is responsible to learn it. Students are not expected to question and discuss (Yildiz & Bichelmeyer, 2003). In one report, eastern students from China, Russia, and India noticed more required interaction in a US online class compared to classes in their home country, which focused more on studying lecture notes (Liu et al., 2010).

Assessment takes different forms in different cultures and contexts from externally assessed work to teacher graded work or student reflections (Rasmussen, Nichols, & Ferguson, 2006). In the study by Liu et al. (2010), Asian students reported that instructors from the US educational culture assessed through process or application-based methods while eastern educators use memorization methods. Russian students thought Russian assessments were more final-exam oriented and US assessments were

more on going and process oriented. Asian students were surprised to learn that participation was assessed by their US teacher (Liu et al., 2010).

The presentation of class material can affect the ease with which multicultural students navigate through course material. For example, websites designed for an Asian audience use mostly graphics to direct navigation, whereas websites designed for western Europeans use more linear navigation paths based on students' learning styles (Sadykova & Dautermann, 2009).

The sequence of the content presented in class was described as a barrier to learning (Liu et al., 2010). Chinese students expressed frustration at the non-linear, case-based material from their US teacher. While they appreciated the value of the case-based curriculum in promoting application skills, they requested that the teacher review main ideas and important points with the students so they could better identify fundamental concepts (Liu et al., 2010).

It is clear from the literature that developing cultural understanding would help online teachers better express their expectations, which would greatly reduce the difficulties experienced by multicultural students (McLoughlin, 1999; Ujitani & Volet, 2008; Volet & Wosnizta, 2004; Yildiz & Bichelmeyer, 2003). In one case, Asian students had a different understanding of copyright rules than their US instructor and they felt that the severe punishments for the violation of these rules were unfair. A lack of intercultural understanding caused the instructor to overlook the need for an explanation of expectations and consequences (Liu et al., 2010). In another instance, students describe confusion about what content was mandatory and what was optional (McLoughlin,

1999). In theory, these complications could be eliminated through clarification of the teacher's expectations.

Recommendations can be found in the literature regarding the tools that have been effective in complimenting teaching and learning styles (see Table 1). If sequenced appropriately and clearly explained, these tools can complement the teaching and learning styles of individuals from across the globe.

Many tools were found effective. One possible combination is to organize course materials within a learning management system (Yang et al., 2010). The location of the individual documents might be depicted on a prominent site map to help students navigate the course (Rasmussen et al., 2006). Content could be presented using descriptive presentations, video, audio, or graphics (Rasmussen et al., 2006).

Tutoring sources can be offered to supplement the lesson material. Researchers found it effective when teachers offer links to external tutorials or explanations (Bonk & Zhang, 2006; Hamilton & Woodard-Kron, 2010; Laud & Mathew, 2007; Rasmussen et al., 2006).

Students can study using graphic organizers (Rasmussen et al., 2006) and online tests (Bonk & Zhang, 2006; Collis, 1999). Secure online testing sites were found to be a reliable resource for officially administered tests (Bonk & Zhang, 2006; Collis, 1999).

Table 1 **Tools for Complimenting Teaching and Learning Styles**

Application	Tool
Organizational course material (e.g., syllabus, calendar, lesson preview, announcements, FAQs)	Learning management system ^g
	Site maps ^e
	Presentation software ^{a,e}
	Video ^{a,e}
	Audio ^{a,e}
	Screen capture software ^{a,e}
	Graphic ^e
	Social networking ^c
Tutoring	Links (webtours) ^{a,b,e, d}
	Instant message ^e
	Video ^c
Revision	Online testing ^{a,e}
	PowerPoint game ^f
	Annotated electronic texts ^c
Feedback	Online testing ^{a,e}
	Email ^e
Note-taking	Note-taking guides ^e
	Graphic organizers ^e
Reflection	Blog ^e

Note. ^a(Bonk & Zhang, 2006). ^b(Collis, 1999). ^d(Hamilton & Woodard-Kron, 2010). ^d(Laud & Mathew, 2007). ^e(Rasmussen et al., 2006). ^f(Wang, 2011). ^g(Yang et al., 2010).

Encouraging Discussion and Collaboration

Social cues and nuances are difficult to convey through technologies typically used in distance education like discussion forums, email, live chat, and even video chat (Liu et al., 2010). In this less interactive environment (O'Rourke & Martin, 2011), students-to-student interactions and instructor-to-student interactions are limited by the availability of interactive software and by the appropriateness of such tools for learning.

The consequences of inadequate social interaction are felt strongly by multicultural students. Erichsen and Bolliger (2011) showed that international university students experienced more academic and social isolation than their peers when they participated in an online course. Students who are not interacting face-to-face with peers and instructors struggle to establish their social presence, which is an essential characteristic of learners (Yildiz & Bichelmeyer, 2003). The closely related idea of cultural identity is also challenged in a multicultural online learning environment (Nelson & Temples, 2011; Skinner, 2010).

Student-to-student interactions vary between cultures in the amount of collaboration and the degree to which the collaboration was optional or required by the professor (Collis, 1999; McLoughlin, 1999). Students from some cultures are more comfortable working within social learning groups than others (Ujitani & Volet, 2008). Indian students noted that the Indian students were more team-oriented than the US students who were more individualistic and preferred to work independently (Liu et al., 2010).

Other times, student-to-student communication is complicated by styles of communicating. A study of the relationships between Australian students and Japanese

students found that the students communication troubles fell into these categories: jokes, communication styles, “instrumental relationships” (relationship as a means to an end), non-verbal behavior, and privacy (Ujitani & Volet, 2008, p. 286). In particular, Japanese students were more implicit and subtle, and Australian students were more direct.

Additionally, Skinner (2010) found that international students avoided asking for help (particularly emotional or psychological) from professionals. Discussing problems openly may help students adapt to the new cultural learning environment and avoid isolation. Researchers reported that Asian students had difficulty expressing critical thinking. They hypothesized that the reason for the silence is that Asian students are not typically expected to share their opinions and views in the classroom (Chiu, 2009).

Timing was declared a problem of multicultural student groups. Chinese university students had busy professional lives and wanted more regular structure so students could plan better to complete their work on time (Liu et al., 2010).

Scheduling across time zones can also impact the ability to hold synchronous discussions. Despite this difficulty, the value of synchronous chats in establishing classroom identities should be considered when weighing the costs. Synchronous discussions are often recommended as useful tools for interaction (McLoughlin, 1999; Rasmussen et al., 2006) and for cultivating social presence, which is the students’ method of establishing their identity within the community (Volet & Wosnizta, 2004).

Asynchronous discussions forums also are frequently cited as an effective tool for group discussion (Liaw & BrunnLe Masters, 2010; Rasmussen et al., 2006). However, asynchronous discussions can disadvantage some students. For example, one student reported difficulty with an assignment that required all students to respond to questions in

an online discussion forum in a timely manner. They were also requested not to repeat answers given by other students. Some were disadvantaged simply because they got to the discussion later (woke up later) (Liu et al., 2010).

While the tools for discussion and collaboration alone cannot overcome challenges like scheduling, some have proven effective at providing an interactive environment. Volet and Wosnizta (2004) showed that students were better able to develop a sense of social presence when the class discussion included a complex discussion through chat and discussion forum.

Other tools were shown effective for roleplay, sharing perspectives, co-creation, and archiving communications (see Table 2). Particularly, students can explore one another's cultural backgrounds through the use of digital storytelling software (Sadik, 2008; Wang, 2011). Sharing these personal perspectives might help improve communication among different cultures.

Table 2 Tools for Encouraging Discussion and Collaboration

Application	Tool
Group discussion	Instant message ^{e,f,i,l}
	Video podcasts ^{d,k}
	Email ⁱ
	Discussion forum ^{i,h}
	Conferencing software ^e
	Instant message ^l

Table 3 (continued) Tools for Encouraging Discussion and Collaboration

Application	Tool
Roleplay, debates, mock trials	Bulletin boards ^a
	Discussion forums ^a
	Instant message ^a
	Conferencing software ^a
	3D virtual classrooms ^o
Sharing perspectives	Digital storytelling software ^{j,m}
	Email ^{m,n}
	Discussion forum ^g
	Instant message ^g
	Links (webtours) ^b
Co-creating	Bulletin boards ⁱ
	Blogs ^c
	Wikis ^k
	RSS ^k
	Feeds ^k
	Social bookmarking ^k
Whiteboards ^a	
Communication archive	YahooGroups ^m

Note. ^a(Bonk & Zhang, 2006). ^b(Barak, Herscoviz, Kaberman, & Dori, 2009). ^c(Dickey, 2004). ^d(Henderson & Putt, 1999). ^e(Liaw & BrunnLe; Masters, 2010). ^f(Liu et al., 2010). ^g(Ngai, 2003). ^h(O'Rourke & Martin, 2011) ⁱ(Rasmussen et al., 2006). ^j(Sadik, 2008). ^k(Sadykova & Dautermann, 2009). ^l(Volet & Wosnizta, 2004) ^m(Wang, 2011), ⁿ(Yang et al., 2010). ^o(Young, 2008).

Incorporating Culturally-Related Content

The content of the course is typically representative of an instructor's culture, but, in many cases, it would be more appropriate if the content echoed the students' experiences (Liu et al., 2010). Researchers recommend building a classroom around students' perspectives and experiences by asking students to reflect on the content as it applies to them (Bonk & Zhang, 2006). Students in the study by Liu et al. (2010) were given case studies that reflected American culture, and international students found it difficult to relate to the content of the studies. During the evaluations, Chinese students wished that the instructors were more understanding of the cultural differences in work environments. These university students explained that they had busy work obligations and occasionally had to work extra hours with very little notice. They requested more flexibility in the timing of class assignments (Liu et al., 2010).

Researchers advocate fostering intercultural understanding for teachers and students (Krajewski, 2011). Creating a classroom that is flexible and able to adapt to cultural perspectives is recommended when teaching multicultural classrooms (Liu et al., 2010).

The recommended tools for incorporating intercultural content tend to draw students out of the virtual classroom (see Table 3). They are websites that organize global projects (Yang et al., 2010), and links to videos, audio recordings, or podcasts from experts across the globe (Bonk & Zhang, 2006; Hamilton & Woodard-Kron, 2010).

Table 4 **Tools for Incorporating Culturally Relevant Content**

Application	Tool
Global projects	iEarn ^c
	Global School House's ^c
	Cyber Fair ^c
	The Global Grocery Project ^a
	The Globe Program ^a
Guest/expert lectures	Audio, video, podcasts ^{a,b}

Note. ^a(Bonk & Zhang, 2006). ^b(Hamilton & Woodard-Kron, 2010). ^c(Laud & Mathew, 2007).

Conclusions

International school students belong to an intricate web of cultures. In order to understand and to most effectively teach such students, it is recommended that teachers have an intimate knowledge of the school's culture and the host country's culture. Without this experience, online teachers for international schools must find other ways to connect with their culturally and linguistically distant students.

When selecting a tool for an audience of international students, teachers should ask themselves if the tool supports course objectives, addresses multiple intelligences, enables social interactions, and encourages intercultural understanding.

The objectives for teaching students from numerous cultural backgrounds can be described as (a) complimenting teaching and learning styles, (b) encouraging discussion and collaboration, and (c) incorporating culturally relevant content. A number of tools have been found effective in teaching multicultural groups of students.

The organization and distribution of content was noted as a challenge for many international students. Students experienced difficulty knowing the teacher's expectations in a US-style classroom in part because the course was case-based rather than the linear classes they were used to (Liu et al., 2010). A site map serves as a useful tool to navigate non-linear content in an online classroom (Rasmussen et al., 2006).

Discussions and collaborations in an online classroom are usually less interactive than in a face-to-face classroom (O'Rourke & Martin, 2011). Discussion forums, live chat, and email, the typical choices for online discussions, do not readily convey body language, social cues, and nuances (Liu et al., 2010). However, using complex discussion through discussion forum and chat, students may be able to develop a sense of social presence (Volet & Wosnizta, 2004), and thereby become more invested in class discussions and collaboration.

Adopting culturally relevant content in the classroom helps students and teachers develop higher levels of intercultural understanding (Liu et al., 2010). Creating a classroom that incorporates the perspectives of many different cultures can be accomplished using external digital resources like websites for global projects (Yang et al., 2010) and recordings from world experts (Bonk & Zhang, 2006; Hamilton & Woodard-Kron, 2010).

With intercultural understanding, clearly stated expectations, high-level communications among teachers and students, and culturally relevant course content, it is expected that students from multicultural backgrounds can be members of more effective online classrooms in which culturally founded barriers to teaching and learning are reduced.

CHAPTER 3: METHODOLOGY

The number of research studies found in the literature that involve both online teachers and international schools is scant. Most of what has been published with regard to culture and online learning deals with university-aged students, while the research done on culture in international schools deals primarily with students enrolled in brick and mortar international school classes. Thus, in order to identify how online teachers are teaching international school students, interviews were conducted using open-ended questions to uncover the current practices in these environments.

Research Design

The study was conducted with the approval of the Boise State IRB committee (See Appendix B). This interview study was designed to answer the research questions: How do online teachers of international school students use technology to connect with their multicultural students? In particular, what technological tools are they using to individualize instruction, and what tools do they use to promote intercultural understanding among their students?

This is a very specific topic where very little research has been done to date. The research questions aimed to establish a foundation of knowledge in this subject area. An interview study was best for answering these questions because narrative descriptions are useful in establishing a broad base of information in a new area (Hsieh, 2010).

Data was collected through an interview-style study of teachers (n=12). Phone interviews were conducted with seven of the twelve teachers. Due to a miscommunication with one school administrator who was assisting in the volunteer recruitment, the remaining five teachers wrote their responses directly on the interview guide and returned the answers via email. Time limitations for the study prevented the correction of this mistake; nevertheless, the written responses provided the necessary information.

The Interview Guide led both groups of respondents through a series of open-ended questions and discussion topics (See Appendix A). This method allowed respondents to talk freely about their experiences, attitudes, and beliefs (Jabine, Straf, Tanur, & Tourangeau, 1984), although the phone interviewees responded in much greater depth than the written interviewees.

The study revealed the current practices in teaching international school students online. This provides a wide breadth of information to establish the foundation of current practices for teaching international school students in an online environment.

Participants

The participants described in this study are online international school educators who teach students in the final two years of the students' secondary education. Online international school administrators were contacted and asked if they were willing to pass on an email message to their online secondary school teachers to invite the teachers' participation in this research study. Potential participants were invited to join the study through a recruitment email message briefly describing the study's purpose, aims and

objectives, and mode of data collection. A follow-up email confirmed the teacher's interest, or lack thereof, as a participant in the study.

The participants were selected using convenience sampling. The online international schools that were contacted were each asked for study volunteers from among their teachers. Of the volunteers, one teacher had a small class in which all the students came from the same country. This volunteer was not selected for the study due to the lack of cultural diversity in the teacher's class. The remaining 12 volunteers were all selected to continue with the study. Table 4 describes the teacher's profiles.

Table 5 **Participant Profiles**

Pseudonym	Gender	Nationality (by region)	Highest degree	Years teaching	Years teaching face-	Grade(s) taught in 2011-2012	Subject(s) taught in 2011-2012
Teacher 1	F	North America	Master's	1	8	11	Foreign language
Teacher 2	F	South America	Master's	1	8	11	Foreign language
Teacher 3	M	Asia	Master's	1	6	11	IT
Teacher 4	F	Europe	Master's	3	20	11,12	Social sciences
Teacher 5	M	Europe	Master's	1	33	11	Social sciences
Teacher 6	F	South America	Master's	1	--	11,12	Foreign language
Teacher 7	F	North America	Master's	5	3	11,12	Arts, IT, Social sci
Teacher 8	F	North America	Master's	1	6	11,12	Social sciences
Teacher 9	M	Europe	Master's	2	23	11	Mathematics
Teacher 10	M	North America	Master's	6	13	11,12	Foreign languages
Teacher 11	F	North America	Bachelor's	1	4	11,12	Arts
Teacher 12	F	North America	Master's	6	7	11,12	Mathematics

Before the phone interviews, the seven teachers were asked to review the informed consent form. At the beginning of the phone interviews, the teachers were asked to verbally confirm that they had read the consent form and agreed to participate in the voluntary study. Respondents from written interview group read the consent form and agreed to the study conditions in writing. In agreeing to participate, respondents acknowledged that they were aware of the research goals, the collection of data from their responses, the anonymous contribution of their experiences, the researcher's commitment to participants' privacy, the possibility of the study or derivations of the study being published, the possibility that their identity might be realized through the combined details they would share during the study, and that participation was voluntary.

Interview Guide

The Interview Guide (see Appendix A) consisted of six open-ended questions falling in two main categories. The questions were drawn from recommendations for teaching multicultural groups of university-age students found in the literature.

Teachers who were interviewed over the phone were given the interview questions in advance, but were told they did not need to prepare answers ahead of time. These teachers were able to ask for clarification to better understand the interview questions. During the questioning, these seven teachers were asked frequently to give examples or go into more detail.

The five teachers who responded in writing were given the questionnaire and returned it complete. These teachers formulated their explicit responses before the interview questions were returned. The disadvantage of this method was that no questions

of clarification arose from the respondents and some of the questions were misread or misinterpreted. A follow-up phone call would have given clarification; however, by then, the remaining time for the study prevented scheduling, conducting, and transcribing additional phone calls.

Data Collection

The phone interviewees scheduled an appointment for a Skype-based interview. At the request of two participants, a conferencing software program was used instead of Skype. The conversations were recorded with Audacity recording software. Initially, the phone interviewees were asked the demographic questions. Next, they were asked the first questions. Subsequent questions were asked in an order that seemed to fit the natural flow of the conversation, rather than the order in on the Interview Guide.

The interview participants were given an opportunity to explain specific instructional tools and strategies and to express specifically how, why, and to what extent their methods were successful or unsuccessful. If a teaching strategy is of particular interest for the study, the phone interviewee was prompted for more information. The average phone interview lasted for 46 minutes, and contained 4,617 words, including both questions and responses.

The five written interviewees were sent the Interview Guide and consent form as attachments in email. Respondents completed the questions independently without requesting clarification. They returned the finished document via email. These interviews were on average 596 words long, including both questions and responses.

One of the interviews was returned to the respondent for a member check due to poor sound quality during the interview. The remaining transcripts were not returned for member check. Instead, the transcripts were crosschecked with the notes and recordings.

The interview method has been successfully used in two recent, similarly designed studies of online teachers. Hsieh (2010) interviewed 11 online university teachers about their experiences and perceptions as online teachers. Hsieh used eight open-ended interview questions as guides for the interview discussion. Discussion of feelings, thoughts, and actions were encouraged and added dimension to the description of their teaching experiences. Zhu, Valcke, and Schellens (2010) interviewed 60 online university teachers about their perspectives of a teacher's role. The semi-structured interview asked open-ended questions. Interviews lasted between 45 to 60 minutes. The similarities of the goals of these studies in comparison with the study outlined here support the use of the interview method for this study.

Following the successful examples of the Hsieh (2010) and Zhu et al. (2010) studies, interviews for this study followed a pre-prepared Interview Guide (See Appendix A). The Interview Guide covered the main areas of concern from the literature review: coordinating teaching and learning styles, and cultivating intercultural understanding through encouraging discussion and collaboration and incorporating culturally relevant content.

The audio from the interview recording was transcribed using TranscriberAG software. As the audio recordings were manually transcribed, this software aligned a text document with markers in the audio recording. Upon review of the conversation, the

teachers were contacted as necessary via email to expound upon or clarify responses from the interview.

With consideration to the participants' privacy, each respondent was assigned a random number between 1 and 12. All identifying information was removed from the written records. Collected data was stored on a password-protected computer account to which the researcher has sole access. The anonymous data will be kept for three years to comply with federal regulation. After that time, it will be destroyed.

Data Analysis

Once the interviews were completed and transcribed their contents were analyzed in ATLAS.ti 7.0.76 in order to conveniently organize and categorize dialogs. The dialogs were analyzed using open coding, axial coding, and selective coding (Leedy & Ormrod, 2010). The Zhu et al. (2010) study and the Hsieh (2010) study used similar coding strategies in analyzing content from their interviews.

First, open coding was applied to dissect the dialogs by breaking them into segments and organizing them according to themes and supporting subthemes. It was anticipated that the themes would include challenges that the teachers identify with regard to teaching multicultural students, strategies they use to overcome those challenges, and perceived effectiveness of the strategies. Through the open coding process, 62 free nodes were assigned. Subsequent coding and analysis was largely based on this thorough categorization of the data.

Second, relationships between the themes and subthemes were investigated using axial coding. The coding was directed by considering the conditions from which the data arose, the circumstances surrounding the issues, the way the teachers managed situations,

and the consequences of their management strategies with relation to other themes and subthemes. As the associations became apparent, the themes and subthemes were refined. Fourteen sets of nodes were established (e.g., organizational course material, tutoring, content distribution (related to teaching and learning styles), student assignments, revision, feedback, reflection, group discussion, one-on-one discussion, sharing perspectives, co-creating, content distribution (for culturally relevant content), global projects, guest/expert lectures). The nodes described applications for which different tools were used.

Third, using selective coding, the themes identified in the open coding and the relationships discovered in the axial coding were organized into a story line to show the generalized experiences and perspectives of the group of twelve online international school teachers.

Finally, a description was constructed of how online teachers use technology to meet the culturally rooted differences between themselves and their multicultural students from international schools. The description incorporates the perceived effectiveness and consequences of their strategies under various conditions.

Findings

The data on technological tools were initially organized according to their use. Each tool mentioned by the respondents was assigned to one or more node sets, or applications. For example, the wiki tool was assigned to both the *student assignment* node set and the *co-create* node set. Table 5 shows the most frequently cited tools arranged by application.

Table 5 generally mirrors the applications described in the literature. However, a few new applications arose during the coding. The new categories applied to everyday classroom activities. The new applications were *distributing content* to students, the *students creating assignments*, *one-on-one discussion* among teachers and students, and culturally relevant *content distribution*. The tools also largely resembled the recommended tools from the literature. The respondents mentioned some new tools (i.e., slideshow software, text-to-voice software, Dropbox, Skype) and, in contrast, gave no mention to a few of the tools recommended in the literature (i.e., digital storytelling software, 3-D virtual classrooms, online tests, graphic organizers, and site maps).

Table 6 **Tools Used in International Online Classes**

Objective	Application	Tool
Complimenting teaching & learning styles	Organizational course material (e.g. syllabus, calendar, lesson preview, announcements, FAQs)	Learning management system ^f
		Slideshow mashup (Animoto) ^f
		Calendars ^k
		PowerPoint ^j
	Tutoring	Conferencing software ^{b,f,i,l}
		Screen cast software (Jing) ^{d,f}
		Online content suite ^j

Table 7 **Tools Used in International Online Classes**

Objective	Application	Tool
	Content distribution	Links/Web tour ^{a,f,l} Video ^{a,b,f,g,j} Email ^f Word processing ^a News feeds ^c Audio ^c
	Student assignments	Blogs ^{e,f,g} Wikis ^{c,e} Video editing ^{c,f} Photo editing ^c Web authoring ^c Screen cast (Jing) ^f GoogleDocs ^d Word processing ^{g,l} Presentation software ^j
	Revision	Text to voice software ^g
	Feedback	Audio ^{c,a,g} Dropbox ^{a,d} Instant message ^{g,l}
	Note-taking	-----
	Reflection	eBulleton board ^f

		Blog ⁱ
Encouraging discussion & collaboration	Group discussion (*denotes overlap with "Sharing personal experiences")	*Discussion forum ^{a,*b,*c,*d,*f,*g,*h,*i,j,*k} *Conferencing software b,g,h,i,*j,k,*l *Media-based discussion Forum ^{*b,d,f} Voice-based discussion forum ^{a,d,f} *Social networking ^{a,c,*h} Speaking avatar (Voki) ^j Online content suite ^j
	Roleplay, debates, mock trials	-----
	One-on-one discussion	Skype ^{abc,e,f,h,i,j,k} Email ^{b,d,e,f,h,i} Instant message ^{e,l} Phone ^{d,l}
Encouraging discussion & collaboration (continued)	Sharing perspectives	Blogs ^{a,d,f,i,l} Wikis ^f Video editing ^a Screen cast (Jing) ^a Instant message ^l Skype ^j Email ^l

	Co-creating	Wikis ^{a,d,f,g} eBulleton boards (Stixy) ^f Dropbox ^d GoogleDocs ^d
	Communication archive	-----
Incorporate culturally relevant content	Content distribution	Audio ^{c,f} Conferencing software ^{j,l} Links (web tour) ^f Collage software (Vuvox) ^f Presentation software ^c Video editing ^c Photo editing ^c Web authoricg ^c News feeds ^c Wikis ^a Blogs ^e GoogleDocs ^d Online content suite ^j
	Global projects	UNESCO sites ^f
	Guest/expert lectures	Video ^{a,b,f,j}

Note. ^aTeacher 1. ^bTeacher 2. ^cTeacher 3. ^dTeacher 4. ^eTeacher 5. ^fTeacher 6. ^gTeacher 7. ^hTeacher 8. ⁱTeacher 9. ^jTeacher 10. ^kTeacher 11. ^lTeacher 12.

In order to see which tools were used by the most teachers and for the most applications, a simple calculation was performed. The individual tool applications (i.e.,

blogging for student assignments) were identified. Then, a tally mark was placed beside that tool for each teacher (i.e., three teachers use blogging for students). The additional tool applications and the frequency of teacher use was totaled for each tool. For example,

Frequency of Blogging =

3 Teachers x Student assignments + 1 x Reflection + 5 x Sharing perspectives

In this way, the total number tool uses, including all teacher responses and across all applications, was calculated (see Figure 1). Two of the tools stood out as the most frequently used: discussion forums at 17 uses and conferencing software at 15 uses. Blogs and Skype, an online chat and telephone service, followed these: both reached 10 uses. Video trailed closely behind (9 uses) with email and wikis (each 8 uses) finished off the top seven tools used.

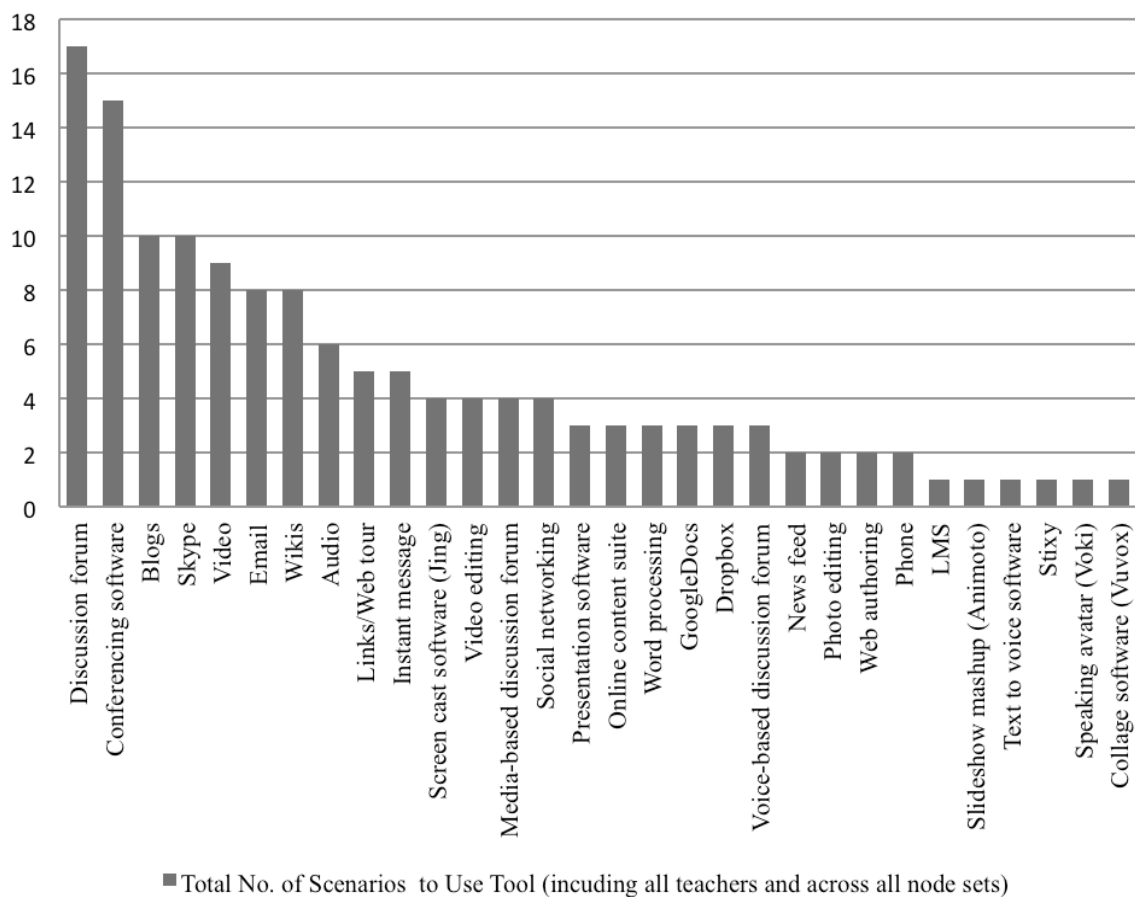


Figure 1 Total Frequency of Applications for Tool Use

Interestingly, when arranged by their specific use, the top tools were used predominantly for discussion and collaboration purposes (see Table 6). Discussion forums were the tool of choice for group discussions. Discussion forums were used by 9 of the 12 teachers for positive multicultural group discussions. Conferencing software was used for group discussions by half of the teachers. Skype was described as the tool of choice for one-on-one discussion (used by 9 of 12 teachers), followed by email (6 teachers). Discussion forums (8 of 12 teachers) and blogs (5 of 12 teachers) weighed heavily as tools for sharing different perspectives.

Table 8 **Specific Uses of Top Tools**

		Discussion forum	Conferencing software	Blogs	Skype	Video	Email	Wiki
Teaching & learning styles	Organizational material							
	Tutoring		5-6 Teachers use.					
	Content distribution					5-6 Teachers use.	1-2 Teachers use.	
	Student assignments			3-4 Teachers use.				3-4 Teachers use.
	Revision							
	Feedback							
	Reflection				1-2 Teachers use.			
Discuss & collaborate	Group discussion	9-10 Teachers use.	5-6 Teachers use.					
	One-on-one discussion				9-10 Teachers use.		5-6 Teachers use.	
	Sharing perspectives	7-8 Teachers use.	1-2 Teachers use.	5-6 Teachers use.	1-2 Teachers use.		1-2 Teachers use.	1-2 Teachers use.
	Co-creating							3-4 Teachers use.
Culturally-relevant content	Guest/expert lecturers							
	Content distribution		1-2 Teachers use.			5-6 Teachers use.		1-2 Teachers use.
	Global projects							

The total distribution of tool use matched the trend of the top tools. The majority of all scenarios for tool use fell under applications for discussion and collaboration (see Figure 2). More than half of the tools (52%) were used with the objective of encouraging discussion and collaboration. The total scenarios for incorporating culturally relevant content consisted of 34% of all tool uses. The total scenarios for tools used to coordinate teaching and learning styles was 14%.

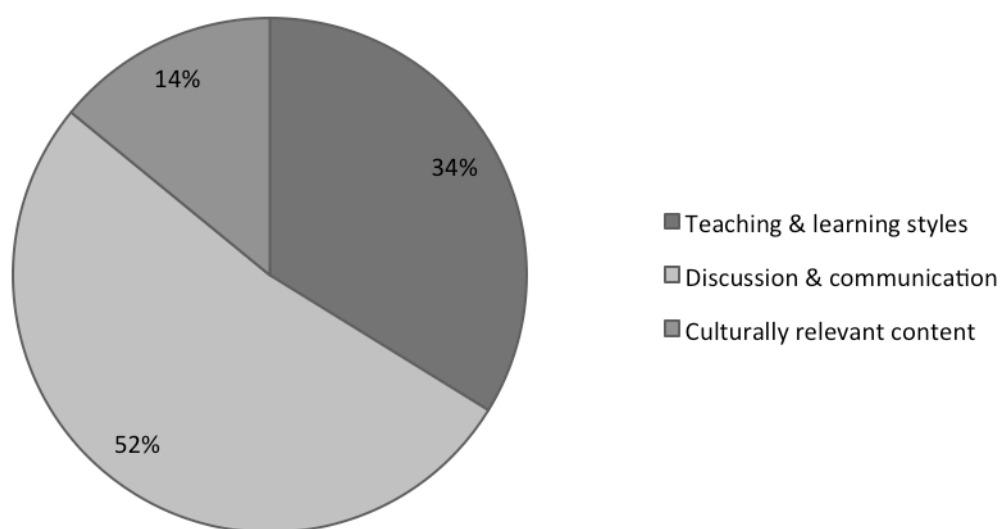


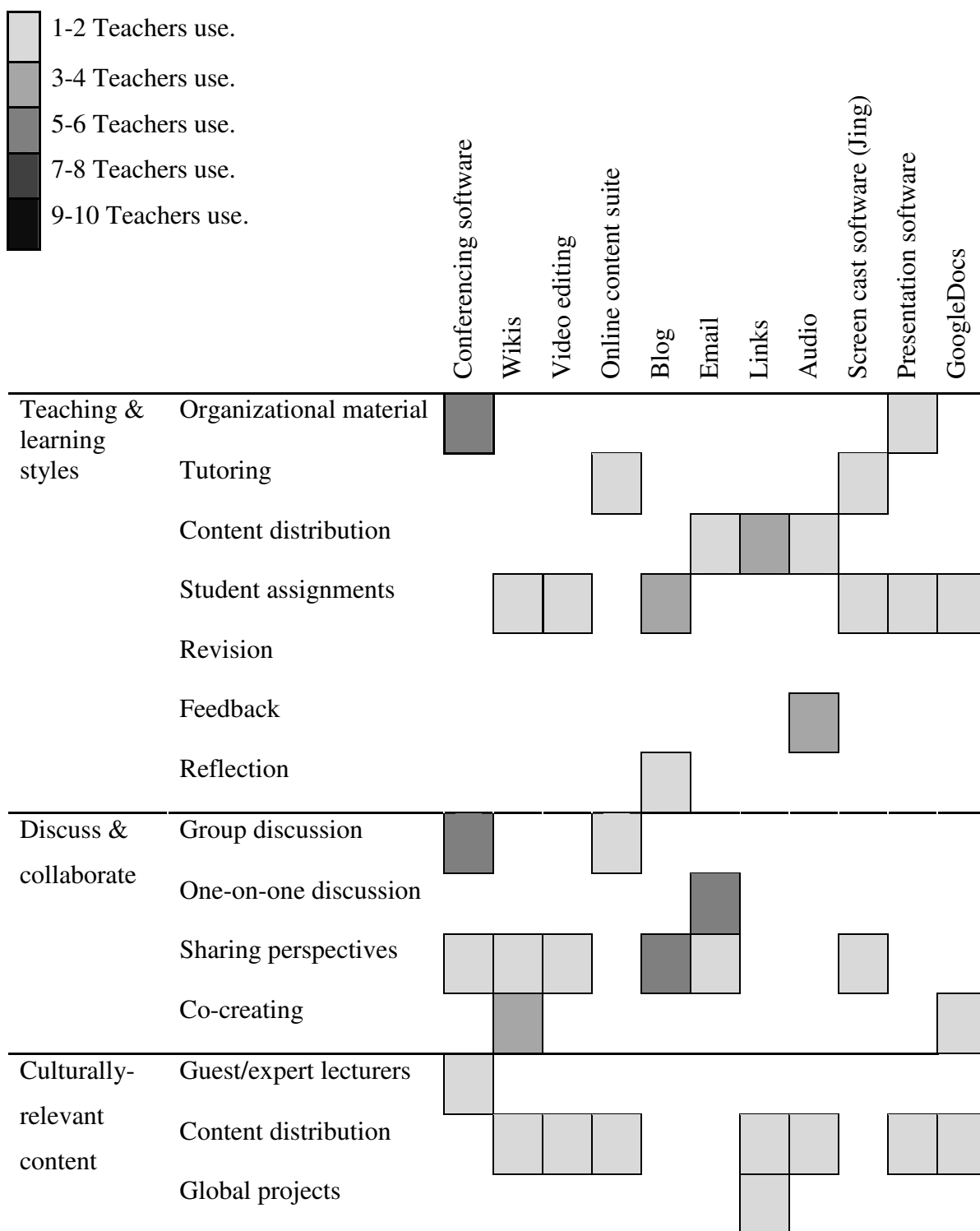
Figure 2 Applications for Tool Use by Objective

Six of the tools were used for synchronous communication among teachers and students. The percentage of all synchronous tool use totaled 28% with conferencing software and Skype forming well above half (64%) of the synchronous interactions. Twenty-four asynchronous tools were reported totaling 72% of tool use. Discussion forums, blogs, videos, and wikis consisted of slightly more than half (51%) of the total 24 asynchronous tools.

The data of the most dominant tools helps to identify where most of the teachers converge in their tool applications. However, these data do not account for tool versatility. Therefore, the tools were arranged according to the number of objectives they fulfilled and the number of applications for which they were used (see Table 7).

Among the top tools for versatility, the conferencing software was the most versatile (most heavily used across four applications). It was frequently used for tutoring and group discussions and occasionally used for sharing personal perspectives and presenting cultural content to the students. Wikis also span all three objective categories, but in much lower frequencies.

Table 9 Top Tools for Versatility



Objective One: Coordinating Teaching and Learning Styles

The first question asked in the Interview Guide was: What tools do you use to encourage learning despite the differences between your teaching style and the teaching style your students are familiar with? With regard to the question, eight of the twelve teachers responded with their general philosophy for accommodating or not accommodating differences in teaching styles. Their strategies fell into the following categories: (a) I try to individualize teaching strategies, (b) I individualize my teaching style at times, in certain ways, and with certain students, (c) I do not individualize my teaching strategy

One experience from Teacher 5 helps to illustrate the point that the consequences of mishandling culturally founded differences in teaching styles can be magnified in the online classroom. In the following experience, Teacher 5 describes this problem of miscommunication.

You've got to accept the fact that students aren't going to get [the lesson concept] right first time, and you are addressing the issue. You are not addressing them. ... If the student's done an assignment and the student got it completely wrong and they were stumped on some fundamentals. [When I correct the student], some students will understand, "You are having difficulties with the content of aggregate supply."... But other students of other cultures, they will tend to generalize with the specifics. So, if I say, "You are having difficulties with aggregate supply,"... I've not recognized that you are any good as a student. That's the danger.

Although it didn't happen online, it probably did happen online without me knowing it. I'm sure I have offended students. And I'm sure that I have offended one or two very badly simply to an innocent remark, which may have not even said that the student is having difficulties.

On the other hand, Teacher 9 claims that the online environment helps teachers get to know their students even better than the face-to-face classroom: "[It's] almost as if the technology allows us to focus on the student who is not talking to us very much and kind of identify it, if that quietness is reflection, [or if] that quietness is a fear of communication. ... [Accommodating] those people who do not want to be in those over stimulating environments, kind of focus in on their needs and their communication."

Individualizing Teaching Strategies

Returning to the general philosophies on individualizing teaching styles, the teachers' comments follow. Teacher 12 gave the most accommodative response. This teacher develops a relationship with the students in order to know their needs. This teacher also reported engaging in one-on-one dialogs with students via phone, email, instant messaging, and online tutoring. Presumably, these avenues were exploited to develop this relationship.

Three teachers reported that they alter their teaching style at times to accommodate certain students. Similar to Teacher 12, Teacher 1 tries to get to know the students in order to know how they will react to certain tools, but the teacher occasionally tries to put the students in situations that are slightly uncomfortable in order to challenge or push them.

In reference to three Indian students who shy away from oral group work, Teacher 1 said, "We sort of say that up front. People come from a variety of cultures, and regardless of where you come from, here's what [School Name]'s philosophy is on learning a language. So they don't get to opt out entirely, but I'll consider that when I pair

them with people. I'll be less likely to require that they post something, I'll make sure that when we do something oral that there is a variety so they can turn it in privately to me."

Teacher 5 takes an individual approach with the students who seem to respond well to it: "...Some students take very well to individualized learning... Others... will not come forward and actually dare take part. They are very shy." Teacher 5 suggests that there is a positive correlation between a student's ability level with the course content and their level of teacher-student interaction. This teacher uses Skype for the individualized teaching.

In another example of a partially individualized teaching style, Teacher 8 says, "Since we do not design the lessons, the majority of our ability to individualize per student happens via our conversations with those students through various technological means, and simply through our detailed grading feedback where we can work with each student, to try to make them better writers, and better students overall."

Teacher 7 captures an alternate approach to the limitations of a pre-designed course: "Our courses are set up to be independent study. Students teach themselves by reading the material and then immediately demonstrating what they have learned." However, students were able to choose either an audio or video assignment format for some assignments.

Finally, Teacher 3 describes the less individualized end of the spectrum to approach differences in teaching styles. With regard to individualizing teaching strategies, Teacher 3 said, "I don't agree with the point of view that the teacher needs to have a different matter of dealing with every kind of [teaching style]." This teacher's argument for this view leads the discussion into the next question.

Individualizing for Student Learning Styles

The second question in the interview guide was: What tools do you use to support students learning styles? It must be noted here that although the literature described problems of miscommunications and misunderstandings arising from differences in the methods of teaching and learning styles that stem from the practices in a person's experiences or culture, the teachers interviewed may have responded with the traditional learning styles (i.e., visual, auditory, kinesthetic) in mind.

Teacher 3 declares that there is a great deal of flexibility for learning in the online environment, which allows students to learn in whatever way is best for them: "The beauty of this online environment is that the very nature caters to all the learning styles." The teacher continues, "I have not, intentionally tried to identify ... their learning styles ... because I am a firm believer that ... online learner[ing] automatically caters to different learning styles. ... Students are totally fit to exploit their own learning styles." Teacher 3's students prefer to use wikis and discussion forums.

In the same vein Teachers 1 and 6 thought that online learning allows for student choice, which allows students to pursue learning in a style that is well suited to them. Teacher 6 gratefully said, "With the model of this program, [students] actually get to present information. [They] get to show us what you have mastered in whatever fashion [the student] sees fit." Teacher 6 explains that students particularly like to use a screen cast software called Jing to make and watch presentations. These students also feel tremendous pride when students see their work exhibited on the showcase slideshow using Animoto, a slideshow software that supports music, pictures, and video.

In contrast, Teacher 2 felt, "it is difficult to support students multiple ways of learning. ... I've tried," but the students didn't respond. Teacher 5 reported that some of the technological tools were not as popular as expected. This teacher felt the learning curve of many of the tools for learning was rather steep for first-time student and teacher users.

As teachers attempted to support students' multiple learning styles, they used a wide variety of tools. There is only slight little overlap among these tools. This category includes several of the less well-known software services like Jing, Animoto, and Stixy in addition to the established tools like blogs, wikis, and Dropbox.

Objective Two: Encouraging Discussion and Collaboration

A few prominent themes arose from the interviews relating to discussion and collaboration and intercultural understanding. Namely, (a) international school students are by and large very sensitive to and polite with regard to cultural differences, (b) while most of the teachers interviewed used discussion forums, conferencing software, Skype, and email for interaction, some of these teachers did not necessarily feel that all of these tools are effective, (c) email and blog journaling were a common media for expressing personal perspectives, and (d) although discussion and collaboration tools rank highest among frequencies of tool use, students, in many cases, are not developing friendships with their online classmates.

High Levels of Intercultural Understanding

The sensitivity of students as reported by Teachers 3, 4, and 6 shows a well-developed degree of intercultural understanding among students: "I would also like to highlight the fact that students at this age are 'aware' and in 99% cases are careful when

discussing different cultures" (Teacher 3); "They are actually quite sensitive to cultural differences, and they are quite tactful" (Teacher 4). Such statements lead to the supposition that international school students have a relatively high level of intercultural understanding. Teacher 9 encouraged intercultural understanding through everyday rules of courtesy: "In my classroom the biggest crime was to make fun of someone [or their] idea. That was the ultimate sin. You can't get in trouble for anything really in my classroom apart from that."

Collaboration Software Not Universally Preferred

As stated above, most teachers (10 of 12) used discussion forums for class group discussion. Typically, discussions were based on teacher-provided prompts. More than half (7 of 12) of the teachers used the chat, audio, and video functions of conferencing software for group discussion. Most of these opportunities were either regular synchronous classes or teacher office hours. Skype was reportedly used by 9 of 12 teachers for teacher-to-student or student-to-student communication. Teacher 6 also opened a Skype accounts during office hours. Email was used by half of the teachers (6 of 12) for one-to-one communication.

Email and Blogs for Sharing Personal Perspectives

Email was described as an effective medium for teachers communicating one-on-one with students, particularly when problems arose. Teacher 6 shared two instances in which students wrote the teacher with what seemed like demanding tones and a lack of formality the teacher expected in teacher-student conversation. The students wrote the teacher using words like with "Hey!" followed by demands such as "Could you try again [to open the document I turned in]! Convert it into something else!"

Teacher 6 used these opportunities to open the communication channels and to exchange expectations and wishes for the student-teacher relationship. In the teacher's words, "if he doesn't know what I like, then, how is he ever going to change it?" The teacher responded to each student in an email message, which was carefully designed to clarify the expectations for teacher-student communication while maintaining a respectful and kind tone with the student.

Phrases like, "I thank you for your dedication...", "With all due respect..." were used at the beginning of the messages. Next, the teacher explained why the students' messages were inappropriate: "When you start your messages with "Hey!" I feel treated very casually..."; "The multiple exclamation marks and the ;/ that you have used in your message ... give the impression of shouted demands and lack of respect." The messages were closed with statements reaffirming the teacher's respect and concern for the students: "I cannot be more pleased of having you as a student. Please keep that in mind."; "Let's turn our page and continue with your success."

Of situations like this, Teacher 6 says:

We are human beings. Sometimes we are communicating [with] each other when we are tired, when we are frustrated. Because we have different backgrounds, miscommunications, misunderstandings happen. And you need to develop a skill or approach the situation to talk about it and to fix it. But ... remember, you don't have this face-to-face, so you cannot be in front of the student smiling and smiling and nodding. There is nothing in your body language that tells the student, I respect you, I value you. So everything is through your words- your words and the way that you present information.

Personal perspectives and experiences were predominantly shared using blog journals. Even in a math class, students were given opportunities to share their personal math history via blogs (Teacher 9).

Lots of Discussion and Collaboration, but Not Always Friend

Despite the high frequency of conferencing software use, teachers report that it is difficult to use and the students, and in one instance the teacher (Teacher 5) does not like it. Teacher 2 remembered only one student attending her office hours in the conferencing software. The structure of holding a virtual classroom or virtual office was, in some cases, embedded in the course model. The frequent reports of conference software use were likely higher than they would be if class models did not require their use.

Some teachers reported that students only interacted with each other out of obligation to course assignments (Teacher 2, 6.). "Just for the main fact that ... the students are just so busy that they just [have] an exact time to do what they're supposed to. That's why we come up with a portion of this for them to interact with each other. To make sure that it is part of their time to have interaction, that connection to another one of their peers," said Teacher 6 about wikis, blogs, and voice-based discussion forums.

In one classroom, students were discouraged from sharing email addresses and instant message screen names (Teacher 7). Other teachers, however, said that students used Facebook (Teacher 1, 3) and instant message (Teacher 5) to communicate informally with each other.

Teacher 2 felt that an initial warm-up session would help stimulate relationships among classmates. The teacher recommended using discussion forum threads for the first meeting and following up with interactions over Skype.

Objective Three: Incorporating Culturally Relevant Content

The teachers found fewer scenarios to incorporate culturally relevant content, with the exception of the few language teachers who were required to discuss culture in

their courses. The tools most commonly used tools for bringing in culturally relevant content were links to external videos, and news feeds. Only two teachers encouraged the informality of social networking sites for informal classroom purposes (Teacher 1, 3).

Teacher 6 uniquely reported asking students to visit global project websites. This teacher had students visit the links to UNESCO World Heritage Sites. They were also sent links to read about an orchestra in Venezuela made up of children in poverty.

Another teacher required students to become involved with an external blog for students: "They use a very famous economics blog called Welker's Wikinomics. And there they can interact with other students as well from all over the world or other of our course sections" (Teacher 4).

Summary

The tools for use in multicultural international school online classrooms closely mirrored the tools recommended in the literature for university-aged multicultural students in online classes. The uses of tools were categorized into three main objectives: coordinating teaching and learning styles, encouraging discussion and communication, and incorporating culturally relevant content. The most frequent tools used were discussion forum, conferencing software, blogs, Skype, email, and wikis. These top tools were predominantly used for discussion and collaboration. More than half of all the scenarios for tool use, in context of supporting multicultural learners, were to encourage discussion and collaboration. Many of the tools had moderate versatility. The most versatile were conferencing software and wikis.

The strategies for individualizing teaching methods for each student varied. Some teachers chose not to alter their teaching strategy, while others attempted to get to know

students individually to meet their needs. There was more agreement in the teachers' approaches to supporting multiple ways of learning. Many found the online learning environment well suited for students to self-select their method of learning from a wide offering of tools. Many established educational tools were offered to students as well as many new or less popular tools.

The top four tools for encouraging discussion and collaboration were used by more than half of the respondents. However, the conferencing software, which was typically used as a virtual classroom or virtual office, was described by some as difficult to use and unpopular with the students. The very high mentions of conferencing software were likely due to school mandated scheduling of virtual classes and office hours.

Lastly, the incorporation of culturally relevant content was the least saturated category. Some teachers had students subscribe to news feeds and watch external videos. One teacher reported sending students to websites for global projects.

CHAPTER 4: DISCUSSION AND CONCLUSIONS

In this study, teachers were asked to identify how they used tools to meet the needs of their multicultural international school students in an online classroom. These teachers do not have the advantage of knowing the students' host country cultures or the students' unique school culture, which Snowball (2009) claims is important for international school teachers to be most effective.

The teachers' responses to the interview questions show that they generally take into consideration the elements in the theory developed by Parrish and Linder-VanBerschot (2010). The elements investigated by this study are (a) consider the cultural differences between the students and the teacher in order to accommodate the students' learning styles and backgrounds, (b) identify the students' cultural values to determine the students' cultural foundation, (c) prepare to promote intercultural understanding and respect students' backgrounds.

Consider Cultural Differences Between Teaching and Learning Styles

The teachers were specifically asked to list how they use technological tools to support students' different learning styles. In an example of three Indian students who were shy to engage in oral group work, Teacher 3 made accommodations for these students to work under more comfortable circumstance by allowing some alternative assignment. Teacher 5 reflected on the circumstances of the online classroom and claimed that technology helps the teacher get to know their students better, especially the

quite ones who are often overlooked in a face-to-face classroom due to boisterous, extrovert students.

When possible, the teachers offered a variety of options for students to obtain course content as well as options for alternative student assignments. In some case, the schools set software requirements and limitations (Teachers 7, 8). In other cases, the teachers chose to forego complex tools like conference software for simple, familiar tools like discussion forums and Skype (Teacher 5). This element of the Parrish and Linder-VanBerschot (2010) theory is well aligned with the evidence from this study.

Identify Students' Cultural Values and Learning Styles

Cultural Values

Identifying students' cultural values was addressed mainly through discussion and collaboration techniques. Tools for discussion and collaboration were the most abundantly used by teachers in this study. Teacher 12 used instant messaging, email, phone, and virtual tutoring sessions to develop relationships with students. Challenges were overcome using email (Teacher 6). Blogs were used by a number of teachers for reflection and to draw out student perspectives and personal cultural experiences (Teachers 1, 4, 6, 9, 12).

The media used for sharing and communicating should be driven by the appropriate stimuli. Researchers (Laud & Mathew, 2007; Volet & Wosnizta, 2004) suggest aligning each technology-based teaching strategy with one or more of the following criteria by asking if the technology-based teaching strategy fulfills these requirements: support course objectives (this strategy was not addressed in this study),

enable social interaction, address multiple intelligences, and encourage intercultural understanding.

More than half of all scenarios for tool-based activities from this study were founded on interaction; however, despite the emphasis on incorporating tools for interaction, some teachers say that the students did not develop friendships with their classmates (Teachers 2, 6).

Teacher 2 suggested that a warm-up activity be designed to help students overcome their shyness in the virtual classroom. The suggested tool was a discussion forum followed by Skype interactions. This activity is aligned with recommendations in the literature to encourage the development of social presence using tools like the discussion forum (Volet & Wosnizta, 2004).

One of the top tools for communication, the conferencing software, is not fully accepted by these teachers as an effective tool for communication. Teachers (2, 5) describe it as unfamiliar and complicated. They say students prefer other tools. The other teachers did not speak negatively or positively about the software. The classroom model, in these cases, likely required these meeting. This would mean that despite not being a favorite tool, the conferencing software ranked near the top of the frequency charts.

In light of this, the conferencing tools used by these teachers do not necessarily foster social interaction. It would be better if class models would either (a) allow teachers to change tools, or (b) provide support and training for teachers and students to effectively use the software required by their courses.

Learning Styles

Teachers from this study attempted to identify and support students' diverse learning styles. They used a wide variety of tools. The tools used for learning styles consisted of many less well-known software services in addition to the more common tools.

In many classrooms, students had some choice in how they view content and develop assignments (Teachers 3, 6, 7). Teacher 6 said of her class, "With the model of this program, [students] actually get to present information. [They] get to show us what you have mastered whatever fashion [the students] see fit."

Some courses allowed for teachers to use a wide variety of tools (Teachers 3, 6, 7). Others were more prescribed, and teachers were limited in the modes of learning they could offer students.

Encourage Intercultural Understanding

Teachers expressed admiration at the levels of intercultural understanding among their students. The intercultural understanding element of the Volet and Wosnizta (2004) theory was well recognized within this group of teachers and displayed by their students. Teachers fostered it through discussion and everyday expectations (Teacher 7), and in some cases through exposing students to culturally rich environments. Teacher 4 required students to participate in blogs with students from all around the world. Teachers 3 and 4 had students sign up for news feeds. Teacher 6 sent links students to learn about global projects.

Some teachers, however, were limited by school safety rules and content guides. Once again, flexibility in content requirements or delivery methods could expand students' exposure to culturally rich environments and thereby improve their intercultural understanding. This question also aligned quite well with the findings from the interviews.

Conclusion

Twelve online international school teachers for secondary schools were interviewed for this study and were asked questions about the tools they use to teach in their multicultural online classroom. The questions were based on recommendations for international online teachers at the university level.

It was found that the recommendations for university-level online teachers were well aligned with the practices of this group of secondary school teachers. The tools were categorized into three main objectives: coordinating teaching and learning styles, encouraging discussion and collaboration, and incorporating culturally relevant content.

Notably, the teachers represented by this study considered the cultural differences between themselves and their students in order to accommodate the students' learning styles and backgrounds. The teachers sought to get to know their students in order to identify the students' cultural values and learning styles to determine the students' cultural foundation; however, in some classrooms, few student-to-student friendships were made. Teachers promoted intercultural understanding and respected students' backgrounds. Lastly, some teachers were allowed to select their technological tools for instruction. They sought tools that would enable social interaction, address multiple intelligences, and encourage intercultural understanding.

The teachers are teaching their students in ways that are well aligned with the recommendations for teaching multicultural groups of university level students in online environments. Follow up studies are recommended to:

- Evaluate the effectiveness of these tools and their applications in the last two years of secondary school,
- Evaluate the discussion and collaboration tools used in online international school classrooms, and
- Compare classrooms in which the teachers are flexible to select their preferred technology tools with classrooms that use pre-selected tools.

Research in this area would evaluate the communication tools and applications to determine their effectiveness in supporting student relationships.

With the rise of online international school classrooms, a thoughtful examination of their practices is important to ensure the appropriate interactions among multiple cultures. This study helps to build the foundation of the practices among online international school teachers. It is expected to be used as a catalyst for future research and reflection.

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APPENDIX A

Interviewer's Guide

Interview Guide

Date: _____

Interviewee #: _____

- I. Exchange personal stories to build trust, share purpose of study
- II. Verify informed consent: Have you read and do you understand the consent document sent to you by email? Do you have any questions? Do you agree to the terms of participation in this study?
- III. Describe the study: International school students have a unique cultural identity which is influenced by their home culture, host country's culture and school culture.

Studies have shown that it is important for international school teachers to understand the host country's culture as well as the unique school culture to promote intercultural understanding.

I want to know how online teachers are using technology tools to identify with their international school students in spite of their cultural differences.

- IV. Collect the following information:
 - a. Teacher's gender: _____
 - b. Teacher's nationality: _____
 - c. Degree(s) acquired: _____; Subject(s): _____
 - d. Number of years teaching (i.) online: _____ and (ii.) in class _____
 - e. Grade(s) taught in the 2011-2012 school year: _____

- f. Subject(s) taught in the 2011-2012 school year: _____
- g. Percentage of students taught this year from an international school: _____

V. Ask the following questions

- a. Describe the tools you use to individualize instruction.
 - i. What tools do you use to encourage learning despite differences between your teaching style and the teaching style the students are familiar with?
 - ii. What tools do you use to support students' multiple ways of learning?
- b. How do you promote intercultural understanding among your students?
 - i. How do you use technological tools (forums, chat, email, video conferencing, wikis, social networks, etc.) to discuss and collaborate?
 - ii. Do you use any particular tools to incorporate culturally-relevant content for your students?
 - iii. Do students discuss and share personal experiences? What media do they use?
 - iv. Do you encourage your students to participate in any culturally-rich online communities outside the "classroom"? What tools are used?

APPENDIX B

IRB Approval Letter



Office of Research Compliance
 1910 University Drive
 Boise, Idaho 83725-1138
 HumanSubjects@boisestate.edu | 208.426.5401

DATE: December 7, 2011

TO: Anneliese Sheffield (PI)
 Chareen Snelson (co-PI)

FROM: Institutional Review Board (IRB)
 Office of Research Compliance

SUBJECT: IRB Notification of Approval
 Project Title: *Teaching Culturally Diverse Students from International Schools: What Online Teachers Have to Say*

The Boise State University IRB has approved your protocol application. Your protocol is in compliance with this institution's Federal Wide Assurance (#0000097) and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Review Type: Expedited	Approval Number: 104-SB11-105
Date of Approval: December 6, 2011	Expiration Date: December 5, 2012

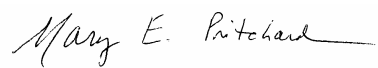
Your approval is effective for 12 months. If your research is not finished within the allotted year, the protocol must be renewed before expiration date indicated above. The Office of Research Compliance will send a reminder notice approximately 30 days prior to the expiration date. The principal investigator has the primary responsibility to ensure a RENEWAL FORM is submitted in a timely manner. If the protocol is not renewed before the expiration date, a new protocol application must be submitted for IRB review and approval.

Under BSU regulations, each protocol has a three-year life cycle and is allowed two annual renewals. If your research is not complete by December 5, 2014, a new protocol application must be submitted.

All additions or changes to your approved protocol must also be brought to the attention of the IRB for review and approval before they occur. Complete and submit a MODIFICATION/AMENDMENT FORM indicating any changes to your project. When your research is complete or discontinued, please submit a FINAL REPORT FORM. An executive summary or other documents with the results of the research may be included.

All relevant forms are available online. If you have any questions or concerns, please contact the Office of Research Compliance, 426-5401 or HumanSubjects@boisestate.edu.

Thank you and good luck with your research.

A handwritten signature in black ink that reads "Mary E. Pritchard". The signature is written in a cursive style with a horizontal line at the end.

Dr. Mary E. Pritchard

Chairperson

Boise State University Institutional Review Board