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Inquiry-Based Methods in the International Baccalaureate Primary Years Program Art Room

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Art Education at Virginia Commonwealth University.

by

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The International Baccalaureate Primary Years Program [IB PYP] is a student-driven, inquiry-based elementary school level educational program that has grown rapidly in the United States since its creation in 1997. This study explores how IB PYP art teachers define and implement inquiry-based instructional methods in their art rooms through a nation-wide, online survey of art teachers, coordinators, and administrators. The Survey consists of 22 questions which ask respondents to describe their classroom practices and provide examples of how they make use of inquiry-based methods in the art room. The responses to this survey were then value coded for four different phases of inquiry and three degrees of student-centeredness to analyze understandings of these practices. This study concludes that conceptions of these instructional methods vary greatly in occasionally contradictory ways. There is need for more robust lesson plans examples and increased frequency and access to subject specific training, in both physical and online settings.

Chapter 1: Introduction

In 2012, I joined the staff of a small international school in Shanghai, China as an elementary art teacher. Living in the *Middle Kingdom* had long been on my bucket list, but my main interest for working at this school was centered in their status as an **International Baccalaureate (IB) World** school. The IB curriculum has a mysterious and alluring status amongst international school teachers– held by myself and many of my peers as the mark of being an *elite* school. Entering my seventh year of teaching and feeling confident in my abilities, I was expecting a relatively seamless transition into this new IB curriculum. The reality, however, was months of floundering in a wash of vague IB manuals, volumes of propriety vocabulary and contradictory advice from IB workshop leaders, coordinators and administration. As time went on, I would reach plateaus of comfort in teaching in what I understood the IB's inquiry-based manner to be, only to meet teachers from different IB schools with disparate conceptions of what inquiry-based practices entailed.

Upon returning to the United States from China, I was surprised with the number of IB schools scattered all over the United States. A cursory search in 2016 revealed the U.S. contained 33% of all International Baccalaureate Primary Years Program schools worldwide, ballooning in under two years to nearly 40% of the worldwide PYP programs with over 580 schools (IBO,[1] 2018a). Witnessing the breakneck speed at which the IB PYP program has grown in the United States. led me to believe other teachers are struggling with the same issues I dealt with four years prior.

[1] The International Baccalaureate officially removed the word "Organization" from their title in 2007, although the phrase *International Baccalaureate Organization* and the abbreviation *IBO* are still used for publications and on their website.

To understand how these PYP schools approach the inquiry-based IB curriculum, I created and implemented a nationwide survey of the practices found in the elementary art room at IB schools. I asked art teachers, curriculum coordinators, and administrators for their opinions and insight into how they handled and adapted the philosophies of the IB to their schools. Specifically, this study aims to explore the way in which teachers in International Baccalaureate Primary Years Program (IB PYP) schools implement inquiry-based methods of instruction in the art room.

Background to the Problem

The PYP (Primary Years Program) is an elementary school curriculum born out of a community of teachers and administrators in various European international schools, steadily expanding into 578 private and public schools in the United States (IBO, 2018a). As the Primary Year Program came into existence in the 1990s, many current PYP schools transitioned from elementary/primary school curricula through an authorization process to become IB World schools. Adjusting to the inquiry-based methods used by the PYP is a continuous challenge for parents, teachers, and administration (Coppersmith, 2013). A search of library resources reveals an added difficulty to this transition: an obvious lack of professionally published resources for classroom implementation.

History of the IB

The International Baccalaureate has offered a "globally-minded" curriculum since the 1960s (IB, 2009a, p. 2). Traditionally found in private international schools, the International Baccalaureate Organization has expanded into public and state schools. This expansion is especially true for the Primary Years Program (PYP), the IB's elementary school curriculum, which is now taught in 578 schools across the United States (IBO,

2018a). The aim of the IB and its associated curricular programs is "to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (IBO, 2018c, para. 4). In order to achieve these goals, the curricular documents for PYP teachers emphasize an inquiry-based method rooted in a student-driven curriculum.

In my personal experience as a PYP art teacher, a considerable amount of time was spent independently researching what exactly "inquiry-based" meant and what methods were being used by other IB art teachers. I have shared the many frustrations voiced by PYP art teachers in their pursuit to acquire best practices for inquiry-based teaching. This study aims to explore and clarify the term "inquiry-based" as defined by both the IB and the scholarly literature in the art education field. Via an online survey, I aimed to understand how practicing art teachers implement the inquiry-based strategies of the PYP curriculum in their IB classrooms. This study aimed to gather and organize a variety of voices to better understand inquiry-based methods of instruction for elementary school art teachers.

Perspective/theoretical framework

An inquiry-based approach to teaching, which I will describe further in this study's literature review, has diverse and sometimes contradictory meanings. Although the term is used across many educational disciplines by many authors, no author's definition is more accepted than the next. I will approach my study of this concept from a constructivist paradigm as this phenomenon features many subjective, and sometimes contrasting, points of view. Social constructivists seek to understand the world through synthesizing many diverse and sometimes conflicting viewpoints (Creswell, 2009). I do

not intend for the perspectives of the PYP art teachers I survey to lead to a precise definition of inquiry-based education, but rather create a diverse set of ideas from which a reader might gain personal meaning and importance.

I did not predict what answers I would receive from such a survey, although I posited the information gathered for this research would lead to new questions. Following the principles of emergent design (Morgan, 2008), in which initial questions inform later inquiries, I asked open-ended questions. I gathered these responses to make meaning in an inductive manner, which potentially will lead to more studies.

Statement of the problem/research questions

In this study, I explored the question *How do IB PYP art teachers use inquiry-based methods in the elementary art room?* and *To what degree do IB art teachers feel prepared to teach using an inquiry-based method?* I limited this question to just the PYP level of IB education as the emphasis on inquiry-based methods in the upper levels of IB schools is approached differently. I also limited my study to schools in the United States as this is the largest area of growth for the International Baccalaureate Primary Years Program.

Purpose of the study

Although the IB uses the term "inquiry-based" in its written documentation, there are multiple definitions of what that term means (Bruner, 1961; King, 1995; Kirschner, Sweeler, & Clark, 2006; Banchi & Bell, 2008). I explored a variety of definitions for the term inquiry-based and examine to what degree the respondents fit that definition. Through the study's survey I investigated how and to what degree teachers are using

inquiry-based methods in their art classes. My intention is to find and share ways in which inquiry-based learning methods can be explored in the PYP art room.

In this study I collected the voices and opinions of art teachers in the PYP setting. These voices may provide concrete examples of successful inquiry-based learning practices in the IB art classroom. They also reveal divergent opinions about inquiry-based methods and describe an area of needed focus in IB art teacher training.

Chapter 2: Literature Review

In this literature review I outline a brief history of the International Baccalaureate Primary Years Program (IB PYP) and its creation and implementation of transdisciplinary themes as the core method for creating inquiry-based instruction. The ideal usage of these themes allows for student explorations across disciplines which create spaces for student inquiry. However outside of these themed situations, the IB fails to thoroughly maintain this environment of inquiry instead returning to more traditional art instruction methods. The second section describes inquiry-based methods found in the literature of general education and art education, which may supplement the gaps of inquiry-based teaching in the IB literature.

Description of the IB PYP

The International Baccalaureate was created in 1964 by a community of international school administrators and diplomats in Switzerland as means of infusing education with a spirit of internationalism, which the existing nationalist schooling models were lacking (Tarc, 2009). From its inception in 1964 until the 1990s, the IB only offered schooling for the last two years of high school with its Diploma Program (Giddings, 2013). Jennifer Giddings, head of the Primary Years Program, described the need for an elementary curriculum in Europe that effectively prepared students for the rigors of the higher levels of international school (Giddings, 2013). In 1990, a collective of administrators and teachers from a variety of international schools formed The International School Curriculum Project (ISCP) in order to investigate how best to foster this internationalism into elementary school curricula. The International Baccalaureate

Organization took notice of and sponsored the ISCP, eventually absorbing them to form the Primary Years Program (Giddings, 2013, p. 8).

Program of Inquiry and the Key Concepts

In searching for the best practices available to create this new curriculum, the ISCP drew heavily from the concepts described in Dr. Ernest Boyer's 1995 paper "*The Educated Person.*" In this paper, Boyer (1995) states that "Educators must help students see relationships across the disciplines and learn that education is a communal act, one that affirms not only individualism, community" (p. 82). Boyer (1995) describes eight core commonalities to organize learning across all subjects as a more effective means of "binding together the human community" (p. 16). The ISCP and the IB saw these themes as a guide for identifying and inquiring into "universally significant issues" (Giddings, 2013, p. 24). They distilled Boyer's eight commonalities into six transdisciplinary themes I visualize in the figure below: "How We Express Ourselves", "How We Organize ourselves", "Where We Are in Place and Time", "Who We Are", "How the World Works", and "Sharing the Planet" (see Figure 1).

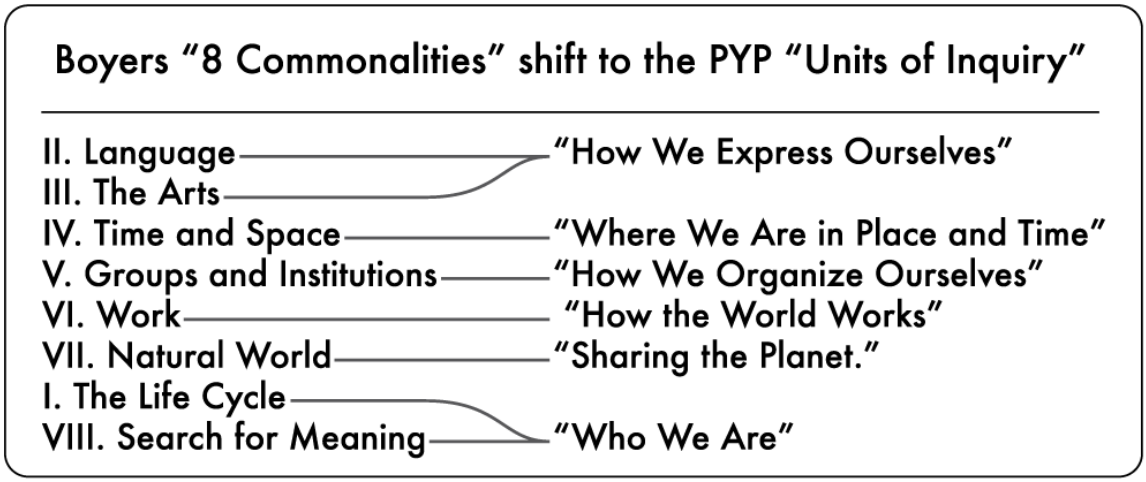

Figure 1 – Boyer's "8 Commonalities" and their relation to the PYP Units of Inquiry. Illustration by author.

These six units of inquiry are collectively called the *Program of Inquiry* and the IB states they are essential to guiding student exploration into common traits of all human experience (IBO, 2014, p. 1). A student may access these units of inquiry individually or simultaneously across many or all subject areas. For example, the unit "Who We Are" can be a self-portrait in art class, a genealogical survey in history class, and a biographical song in music. The IB acknowledges the importance of having focused time in the individual subject areas of school, but also emphasizes that skills may be acquired in a variety of contexts outside the traditional boundaries of an individual discipline (IBO, 2014, p. 8). The Program of Inquiry collectively guides all subject areas of the PYP in order to create transdisciplinary spaces in school.

In addition to the units of inquiry, the IB designates eight *key concepts* in order "to support and structure the inquiries, provide a context in which students can understand and, at the same time, acquire essential knowledge, skills and attitudes" (IBO 2009a, p.15). The eight key concepts are as follows; form, function, causation, change, connection, perspective, responsibility, and reflection. When creating within the units of inquiry, a teacher uses the key concepts to "drive the curriculum… with purpose and direction." (IBO, 2009a, p. 17)

IB Levels of Interaction

The IB aims to create as much collaboration across disciplinary boundaries as possible, stating the themes and key concepts are "of global significance that transcend the confines of the traditional subject areas" (IBO, 2009a p.5). In order to guide these collaborations, the IB designates three levels of transdisciplinary interaction (IBO,

2009b). Theses level describe the amount and way in which the subject teachers interact with each other via the units

In the first level, art teachers meet and co-plan Units of Inquiry with homeroom teachers and other specialist teachers to create as many authentic transdisciplinary opportunities as possible. Each grade level works on a single theme with common key concepts across all subject areas in order to exercise the many different modalities of learning. For these complex planning sessions to work, the school must create a "culture of collaboration" (IBO 2009b, p. 28). This communal approach to teaching and use of the transdisciplinary themes and key concepts allows students to access ideas and topics across many disciplines, thus creating spaces for independent inquiry outside teacher created lessons. This exemplifies the best case for implementing inquiry-based methods of instruction in the PYP.

If the art specialist cannot make authentic connections to the theme being taught in other subject areas, they are encouraged to use the second level of interaction with the units of inquiry. In this second level, the art teacher accesses the same Unit of Inquiry as other teachers, but through an independently developed lesson (IBO, 2009b, p. 28). For example, the unit "Where We Are in Place and Time" might use science class to explore a topic like "*The Birth of Flight*". The art teacher may not be able to create an authentic lesson exactly on the same subject, instead choosing a historically similar period for an art history lesson. This second tier of interaction creates limited areas for independent student inquiry compared to the first level of interaction.

The third level of interaction with the themes occurs when the teacher sees the need for a skills-based lesson about a particular art medium. In this case, the Program of

Inquiry may be completely set aside for an independent exploration called a "stand-alone unit" (IBO, 2009b, p. 129). The stand-alone unit should still attempt to follow the inquiry-based methods of the IB and be make use of related key-concepts for guidance. In instructing outside the units of inquiry, however, the lesson may resemble what is perceived as a more skills-based, traditional art class model (IBO, 2009a, p. 3).

Inquiry-Based Learning

When taken at face value, to *inquire* simply means to *ask*. The act of inquiring itself is not an unusual feature of the classroom; the image of a student raising their hand to ask a question is commonplace. Inquiry in the context of an *inquiry-based curriculum*, however, refers to a broader sense of the word: a student selects a concept centered in their interest, creates a question about this topic, and then guides their own exploration in search of an answer or a hypothesis (Van Merriënboer & Kirschner, 2010). The IB states that inquiry "is the process initiated by the students or the teacher that moves the students from their current level of understanding to a new and deeper level of understanding," (IBO 2009a, p.28).

This concept of a student self-selecting areas of interest to guide their course of learning has been built upon for over a century in many areas of education. Early childhood education programs for that are often compared to the PYP; Montessori, Reggio Emilia, and Waldorf schools, similarly make use of student-driven curriculum (Edwards, 2002). Maria Montessori, founder of the Montessori Method of education, described her brand of child-centered education as giving students "Liberty within limits" (Rambusch, 1962, p. 25). Dr. Montessori's method of instruction called for teachers to prepare environments for students to act freely within allowing them to experience true

freedom in the classroom (Rambusch, 1962). Loris Malaguzi, founder of the Reggio Emilia Schools, similarly described the teacher as a "co-constructor of knowledge" in an effort to decentralize the authoritative role traditionally assigned to teacher (Edwards, Gandini, & Forman, 2012, p. 149). The Reggio model for student-led inquiry positions the learner as the "protagonist" of their own growth, with the role of the teacher constantly being revised (Edwards, Gandini, & Forman, 2012, p. 150). Rudolph Steiner, founder for the Waldorf Schools, placed emphasis on giving students freedom in their education as part of his anthroposophical philosophy guiding his pedagogical philosophies (Steiner, 2011).

The progressive classroom allows students to take a role in the democratic process of education. In *Experience and Education*, John Dewey (1938) lauded the importance ofhigh quality experiences as a learning site and the essential quality of the student voice in the selection of these interactions. A teacher leads the class, albeit in a manner that benefits all of those involved:

> The teacher reduces to a minimum the occasions in which he or she has to exercise authority in a personal way. When it is necessary, in the second place, to speak and act firmly, it is done in behalf of the interest of the group, not as an exhibition of personal power. This makes the difference between action, which is arbitrary, and that which is just and fair. (1938, p.34)

The notion that children deserve voice and selection in their educative process was continued by educational psychologist Jerome Bruner (1961) with his work *Discovery Learning*. According to Bruner, the agency of the student in their learning experience has direct and measurable benefits in their ability to obtain and retain

information. While Dewey (1938) discussed the contrast of the *Traditional* vs. *Progressive* education, Bruner refers to these as *Expository* versus *Hypothetical* teaching styles (Bruner, 1961). In a classroom motivated by the hypothetical, Bruner states that students who have active ownership over their learning encode and organize information in more meaningful ways. A student who is invested in learning something will be better at recalling information at a later date as the connection to the content encourages a student to organize the information with personal connections. Ownership over learning content also promotes a student to succeed via intrinsic motivators versus unsustainable extrinsic ones. If a student aims only to please a teacher or simply pursue knowledge for a letter grade, the ability to retain the learning dissipates when the reward disappears.

The concept of a progressive education centered in the hypothetical, as proposed by Dewey and Bruner, has since informed many ways of conceptualizing how students learn and have been put to use in many different styles of teaching. *Project-Based Learning* (Buck Institute for Education, 2018; Larmer, Mergendoller, & Boss, 2015) and the similarly named *Problem-Based Learning* (Barrows & Tamblyn, 1980) both start with incomplete problems sourced from real world scenarios which allows for open-ended exploration. Boud (1985) describes the concept of *Experiential Learning* which focuses on the reflective component of the educative experiences as a means of following student interest. Seymour Papert extended the ideals of constructivism to his own *Constructionism* theory, describing how children build content associations through an additive, play-based methods (Harel & Papert, 1991; Papert, 1980).

Inquiry in Art Education

In art education, the concept of self-guided inquiry in the artistic process can be traced back to the work of Austrian Art Educator, Franz Cizek (Anderson, 1969; Smith, 1985). According to Malvern (1995), Cizek created lessons providing students with a wide range of media and limited instruction made use of "a pedagogic style that did not impose his or other artists' aesthetic sensibilities on his students" (p. 262). Although, it was later assessed Cizek asserted more control over the students' work than he let on (Wilson, 2004), he nevertheless spoke about the importance of student voice in art education.

Author Efland (1976) and Brent Wilson (1974) both noted a distinction between school art: the rigidly directed art-like activities found in schools, and child art: the independent and uninhibited freeform expression students enact when outside the usual boundaries of school. The notion of scaling back teacher intervention was outlined as an important aspect of allowing students to freely express themselves in the art room. In 20th-century Art Education, White (2004) states inquiry in art has been used for the majority of the last century as a means of engaging critical engagement, self-reflexive consciousness, conceptual thinking, and problem-solving/posing.

Stewart and Walker (2005) continued this line of thinking by stating a need for rethinking the role of the art teacher, stating that the teacher "must shift from that of one who dictates information to one who is a fellow inquirer as students construct knowledge" (p. 15). Lampert (2006) specified the use of inquiry in the art room by describing three types; aesthetic inquiry– the questions about the meaning of art, critical Inquiry– investigating and evaluating a piece of art, and creative Inquiry– visual language as a medium for exploring ideas. Lampert (2013) continues this description of the

concept by introducing the notion of question stems to art education. These short, open-ended questions are meant to engage students in critical thinking and dialogue allows students to connect ideas to previous thoughts and create new meaning.

TAB (Teaching for Artistic Behavior) has received attention in recent art education publications as a form of student-driven art instruction (Douglas & Jaquith, 2009; Gates, 2016; Hathaway, 2013). Tracey Hunter-Doniger (2018) and Michael Gettings (2016) described ways in which the idea of limited intervention by a teacher and the importance of student guided activities are being put to use in contemporary art education spaces.

Levels of Inquiry

The terminology and descriptors for what inquiry-based education entails are varied and occasionally vague. The IB definition for inquiry is specifically stated to be broad as "the animated process of inquiry appears differently within different age ranges" (IBO 2009a, p. 30). For the purpose of this study, it is essential to define more concrete parameters of what is inquiry and what is not. Researchers from the Department of Science Education at the University of Virginia, Heather Banchi and Randy Bell (2008), established a four-step scale to describe inquiry-based methods. These four distinct levels; Confirmation, Structured, Guided and Open are matched with three components (Question, Procedure, and Solution) as a means of identifying these levels. From a science education perspective, these levels describe how successive parts of a lesson may be removed in order to allow more and more student influence over a lesson, in order to promote the scientific process in students. These four levels, although created in reference to science education, I argue have parallels to the art room. I will first describe

the levels of inquiry in Banchi and Bell's (2008) original usage, and later describe their use in the art room in my analysis of the survey results.

A "Confirmation Inquiry" lesson starts with a teacher supplying a question the students will answer, a procedure the students will follow, and a desired outcome via a teacher supplied solution. The students most likely first watch a demonstration of all three components and then "confirm" the results on their own. This leaves little room for investigation and is described as the lowest form of inquiry-based instruction.

The Second level of inquiry-based instruction, "Structured Inquiry" begins the process of removing the components. A teacher poses a question about the subject matter, with a demonstration of the procedure but stops short of providing the results. The student will perform the described procedure with the stated question and report their own findings. In this case, the teacher has provided the both the question and the process, but allows the students to discover their own solution.

The third level of inquiry, "Guided Inquiry," removed the procedure from the lesson. Students are prompted with a question about a particular subject, but must find their own way with to the solution. The students may come up with a variety of different solutions and procedures in this type of process, but the question they are seeking is still defined by the instructor.

The final level described as "Open Inquiry" by Banchi and Bell (2008), pulls all of the aforementioned components and allows the students to create and follow their own line of inquiry. Individually or in groups, the students pose a question to explore. This type of inquiry also places the onus on students to select a process and materials to find a

solution. This level of inquiry mirrors the open and free style of "Discovery Learning" as laid out by Jerome Bruner (Bruner, 1961).

Conclusion

Across the marketing information of the IB, the arts are consistently a prominent feature (IBO, 2016a) and stated to be an "integral" component of the program (IBO 2009a). The IB aims to create opportunities for student-driven inquiry to occur in the classroom, but falls short with their open-ended descriptions. The descriptions Banchi and Bell (2008) created for the levels of inquiry-based engagement would greatly benefit a broader implementation of student directed inquiry in the PYP art classroom. For the purpose of this study, Inquiry-based art education is defined as a method of arts instruction with limited interventions from the teacher, guided by student driven lines of exploration and interest.

Gaps in the existing literature

The most glaring gaps in the literature above are in the PYP's description of inquiry-based methods for specialist teachers. An extra section in the PYP arts documentation to show how to enact inquiry-based methods outside of the transdisciplinary spaces would be of great service to teachers. As it stands, the literature of the IB states "Many different forms of inquiry are recognized, based on students' genuine curiosity and on their wanting and needing to know more about the world" (IBO, 2009b, p. 28). These vague passages seem to lack a commitment to a particular level or style of inquiry.

Conversely, the literature of art education is missing a meaningful discussion about the Primary Years Program. When reading the professional journals of art

education, little attention is paid to the International Baccalaureate and its use of inquiry-based methods. In my research about the IB in the publication in art education, I found only peripheral mentions of their practices (Erickson, 2004; Soep, 2004) and outdated information (Anderson, 1994; Blaikie, 1994; Boughton, 2004). In both *Art Education* and *Studies in Art Education* there is no mention of the more recent Primary Years Program. This mutual absence of discussion is ameliorable with further research.

Chapter 3: Methodology

By gathering information about a human and subjective area of study, it is most fitting to use a qualitative approach to research. Corbin and Strauss (2008) describe the fluid and dynamic nature of qualitative research as a means for creating theory. I am searching for many concurrent truths about the nature of a phenomenon in art education, so I enact a methodology that can effectively gather many voices and viewpoints.

Survey methodology is a useful way to collect the opinions of a wide sample of subjects (Berends, 2006). Understanding how a large number of respondents interact with a phenomenon is well suited to a survey, and accessing as many participants as possible is difficult through other data collection methods as most elementary schools only have one art teacher on staff. Therefore, surveys provide a methodological approach allowing for data collection at many sites in diverse locations while considering time constraints and travel expenses for the research.

Background to the study

Two qualitative studies about the IB PYP have informed this research proposal in their use of survey methods and similarity of subject matter. Burton (2012) conducted a case study of the professional development practices of ten IB PYP schools which included the use of interviews, observations, and a survey. The survey portion of the study looked at homeroom teachers' perceptions about inquiry-based methods in the classroom. The clarity and scope of the questions in this survey were helpful in deciding on the scale of this study as well as the formatting of questions.

Coppersmith (2013) conducted a mixed methods case study looking at the inquiry-based methods of 29 IB PYP homeroom teachers. This study made use of

interview questions asking the teachers to create their own definitions of inquiry-based methods. Both of these studies, although focusing on the inquiry-based methods of the IB PYP, made little mention of art teachers. This study references the frameworks of the aforementioned studies, while exploring them within new areas of the practice.

Design of the study

The survey contains 22 questions (Appendix B) with a mix of open-ended questions about practice and closed-ended demographic questions. The open-ended questions explore how PYP teachers define inquiry-based methods, how they use these methods in class, and what preparations or training they experienced in preparation for this style of teaching. The closed ended questions ask teachers about their education, the length of time they have taught in the IB, and demographic information about their school.

The questions used for this study were based on my own hypotheses about the ways in which PYP art teachers interact with inquiry-based methods. I chose a selection of different subjects which I thought might be relevant to my research questions, focusing on words like big ideas, stand-alone lessons, resources, inquiry-based methods, choice-based art education. The open-ended questions reflect these range of ideas, although in the end some were more relevant than others. The discussion section picks up on three of these questions (**Q12, Q13** and **Q17**) as being the most relevant to this aims of this study.

This survey was published through a web-based service, efficient in terms of cost and ease of accessing a large sample set. The REDCap web-based survey tool is suitable for the distribution of the survey and the collection of data as it handles larger sample sizes and provides diagnostic tools of the survey results. The major limitation for using a

web-based survey is participation by those who have access to computers and the internet (Berends, 2006). While this form of survey might limit access, many of the resources and trainings provided by the IB are online, so I speculated the participant pool may be reached via the web.

Participants/location of the research

There are 1,433 PYP schools listed on the IB directory, and the number of PYP schools in the United States has grown exponentially over the past 10 years. When this survey was first sent out in October, 2017, the United States hosted 539 PYP schools, a number which has since grown to 580 (IBO, 2018a). The US currently contains 40% of all schools of this type worldwide, with the next nearest country in number of PYP schools is China with 57 schools (IBO, 2016a).

Despite being an organization of Swiss origin, the IBO conducts all governance and official business in English (IBO, 2018b) and all the literature accessed in this research was in English. Only one PYP school in the United States directory listed Spanish as a primary spoken language, although their contact information was found in to be in English. For these reasons, the study was conducted in English.

Art is listed as a foundational subject in the IB (IBO, 2016a), so I based my survey research on reaching IB PYP schools with an art specialist on site. My survey was sent to art teachers, coordinators, and administrators to reach a similar sample size found in the studies by Coppersmith (2013) and Burton (2012). Although I asked my particpants the number of years of experience they spent teaching in the PYP in my demographic questions, I do not limit my survey based on that experience. This survey is

qualitative and seeks to describe many experiences, therefore the participant selection will be criterion-based rather than random (Broome, 2013).

In order to obtain contacts, I used a database of PYP schools found on the IB website (IBO, 2016a). In many cases, the email contact information was provided directly through this resource. In other cases, email addresses were gathered from the individual schools' websites. Curricular material and training for the IB is commonly arranged via the web, so the IB may have a list of PYP art teachers' emails. A majority of the schools listed on the IB website have their own public websites and open lists of email addresses, and electronic contact information was available and retrieved for each school listed.

The survey was piloted and revised with three IB PYP educators outside of the sample set. Both the method of collecting respondents and the survey itself were reviewed by VCU's institutional review board and deemed exempt.

Methods of data collection

The survey itself is 22 questions long with a mix of demographic and open-ended questions about the IB PYP curriculum. The survey was hosted on REDCap, an online survey tool for researchers. An introduction email (Appendix A) was sent to the teachers with a web link to the survey.

Using publicly available information from the online IB school directory and individual school websites, contact information for all 539 schools surveyed was gathered. 1,067 individual email addresses were collected, representing 522 art teachers, 394 PYP Coordinators, and 151 Administrators. 145 emails bounced back as incorrect or invalid, resulting in 922 emails successfully sent.

The survey remained open for a two-month period during the fall 2017 and the questions were completed by 87 individual respondents. This response rate equals 9.5% of the total 922 email addresses successfully contacted. This is deemed a sufficient sample size of the population for the purposes of this study.

Data analysis

Corbin and Strauss (2008) describe analysis as an interpretive act and recommend spending a considerable amount of time with the data set before pulling themes from the data (p. 196). Corbin and Strauss(2008) use the term "grounded theory" to describe this method of examining data and allowing the theory to arise from the data itself (p. 1). Grounded theory allows the researcher to find emergent themes in a human centered data set. When using qualitative data, a variety of interpretations can be made by a researcher. During the planning of this survey, I spent time reading the data multiple times before deciding how to organize it. As I distributed the survey through REDCap, I collected answers to both open-ended qualitative answers and closed-ended demographic questions. The demographics are used to inform the system I use for coding the data, and the open-ended answer reveal the opinions of the teachers.

After analyzing the data for the survey aspect of Burton's (2012) study of the PYP, she broke down the data into basic components in order to reorganize it in a meaningful way (p. 51). I similarly analyzed the data, broke it into meaningful parts, and created visual representations in order to meaningfully disseminate the data. A following section on the survey describes the data analysis for selected questions in more depth.

Significance of the study

With this study, I hope to access and distribute a resource for teachers in the PYP art classroom. If the popularity of the PYP curriculum continues to grow as steadily as it has for the past ten years, there is great value in collecting and compiling teachers' views and experiences for the improvement of the PYP curriculum and understanding inquiry-based learning.

Limitations of the Research

The IB has reexamined their K-12 levels of curriculum (PYP, MYP, & DP) twice in the past two decades, and could happen again at any time. This change in curricula could limit how long my comments on their curriculum will remain accurate. As found during the process of this survey, the number of schools using the IB PYP curriculum fluctuates rapidly. This might limit the validity of the data as time goes on.

If this study reveals good quality examples of how to teach with inquiry-based methods, it might be beneficial to examine how teaching practices in the IB could be shared more effectively. The current method for teachers to share information between schools relies on user input to a web-based discussion board through the IB. This discussion board is generally unreliable as the user content is mostly unfiltered by the IB. A follow up study might be a case study of a school that successfully implements inquiry-based methods and how they arrived at that point. What methods are they implementing in order to effectively reach this goal?

Inversely, a case-study of a school having issues with these same methods might provide valuable insight. A school struggling with the implementation of inquiry-based methods might be meaningful to the IB if they wish to continue with their financial trajectory.

If the data I receive from this study reveals a discordance with the literature about inquiry-based instruction, the methods in which the IB trains teachers might be examined. A quasi-experimental study might look at the efficacy of different training interventions for relaying the philosophical and educational values of the IB. The lack of relevant research in the IB arts as well as the relatively young age of the PYP leaves room for many follow up studies for the field.

Suggestions for further research

This study and set of questions has potential for other areas of the arts as defined by the IB, specifically in the Middle Years Program (MYP) and the Diploma Program (DP). A similar series of questions could also be asked to music, dance, and theatre programs in the IB. A natural follow up to this study might be an international survey of the same subject matter. As many of the PYP schools outside of the United States are privately funded, the effect of more resources might provide interesting information to share with other teachers.

Chapter 4: Results and Responses

The Survey contained 22 questions with an equal amount of demographic and open-ended questions concerning student guided inquiry-based instructional practices in the International Baccalaureate Primary Years Program. The intent of having demographic and open-ended questions was to search for correlations between the two sets of data. Questions **one** through **11** asked questions about the respondent's school, education and work experience. Questions **12** through **22** asked open-ended questions about the respondent's understandings and feelings about the curricula and practices of the IB PYP.

Questions 1 through 11 – Demographic questions

The first eleven questions asked respondents to describe the details about their careers and the particulars about their school. Questions **one** through **six** asked for information about the careers of the respondents to get a sense of who was responding and to gauge the reliability of their answers. Questions **seven** through **eleven** asked for details about the school itself to determine if the data is representative of the typical IB PYP school in the United States.

Questions 1, 2, & 3

Question **one** asked respondents to identify their position at school – "Q1. *What is your role at school?"* Of the 87 responses received, 59 respondents identified as an art teacher, 22 identified as a IB curriculum coordinator, two identified as a dual art teacher and IB curriculum coordinator, and four identified as members of school administration. As 61 out of 87 (70%) of the respondents have taught in the art room, the answers appear to be high-quality representations of the typical IB PYP art teachers' experiences.

Questions **two** and **three** asked respondents to indicate the amount of time they have worked as teachers as well as time spent working with the IB. "Q2. *How many years have you taught?"* revealed a fairly even spread across all experience levels in terms of years teaching (see Figure 2). 76 out of 87 responses, or 87% of the respondents indicated they have been teaching for more than six years. For question **three**, "*Individual IB Program Experience,"* 54 of the respondents (62%) stated they have more than six years of experience teaching in the PYP.

The responses for these questions show the survey participants to be experienced and well versed in the IB PYP (see Figure 3). From this data I can also conclude that many of the respondents have experience in a variety of teaching settings, as the number of years teaching is much greater to the number of years in working in an IB program. As such a high percentage of the respondents have more than six years of experience teaching in the IB, they have certainly done a fair amount of reflecting about the strengths and weaknesses of their program. From the first three questions, I conclude the survey reached my intended target audience. The answers to questions one through three indicate the responses I gathered with this survey are an accurate reflection of a typical PYP art teacher in the United States.

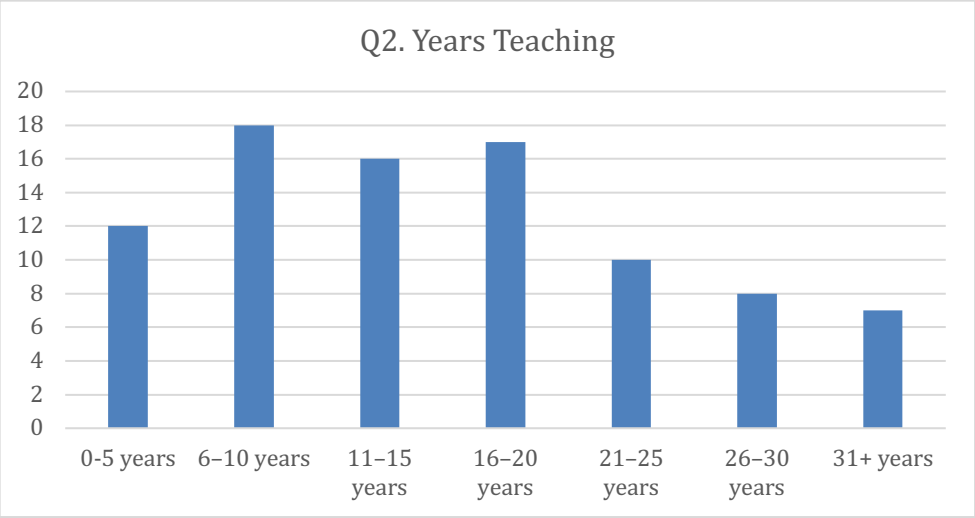

Figure 2. Question 2 - Number of years teaching per respondent.

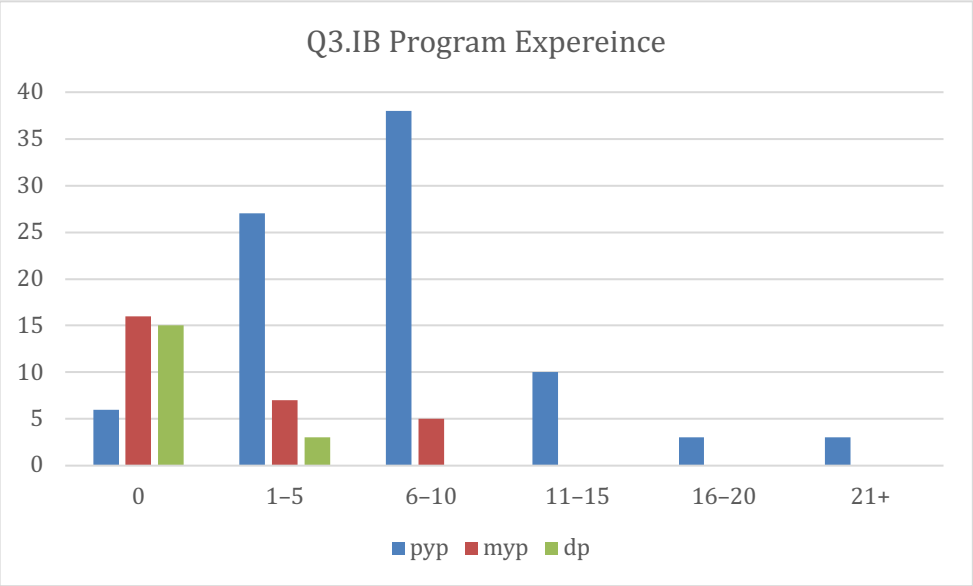

Figure 3. Question 3 - *Number of years teaching in each level of the IB per respondent.*

Questions 4, 5, & 6

Questions **four** (*Q4. What is the highest level of education in which you have earned a degree?),* **five** *(Q5. What was your major area of study?),* and **six** (Q6. *Are you certified to teach?)* revealed that nearly all (95.4%) of the respondents hold teaching certification. All respondents earned at least an undergraduate degree, with 66.3% of

which having earned a Master's Degree or higher. 51 of the respondents (58.6%) indicated holding a degree in "Art Education," and 66 respondents (75.8%) reported having a degree in "Education." From these three questions, I determined nearly all the respondents have academic training in education with many receiving formal fine arts training. I conclude from these survey responses that the survey was completed by trained and competent respondents with a firm understanding of pedagogy and curriculum.

Questions 7, 8, & 9

Questions **seven**, **eight**, and **nine** asked the respondents to identify the type of school or institution for which they work. As the data for this survey was collected anonymously, these questions were an important means of determining if the answers gathered were representative of the different types of IB PYP schools found in the United States.

Question **seven** "Q7. *What region of the United States is your school?*" asked respondents to locate their school using United States census map (see Figure 4; United States Census Bureau, n. d.). By collecting regional data, it was possible to compare the anonymous results of the survey with the actual numbers of IB schools by region using data from the IB website (IBO, 2016a). The highest number of respondents were from the South Atlantic (region 5) with 31 respondents of 130 and the second highest response rate came from the East North-Central area (region 3) with 16 schools reporting out of 35 schools. Although the representation of each region as found with this survey does not match exactly with the percentages of schools in each region (see Figure 5), this question did reveal representation from every region has been collected.

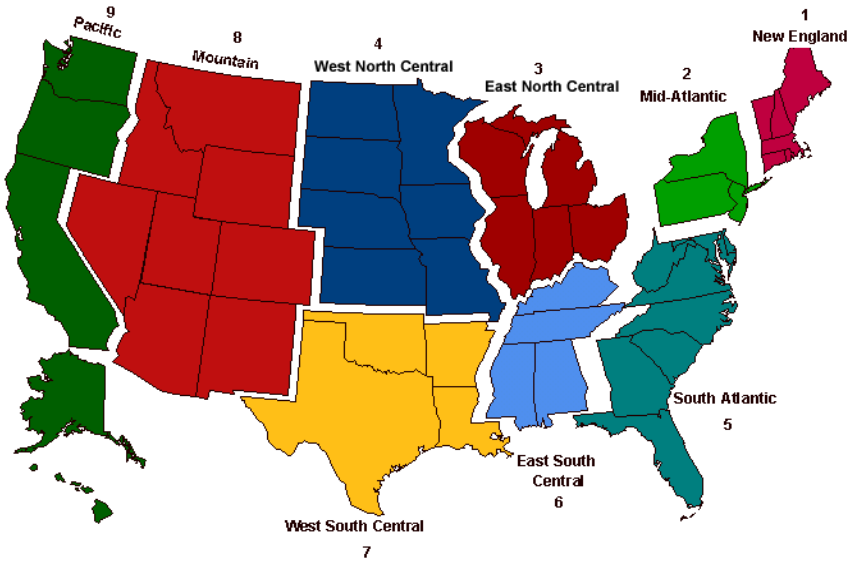

Figure 4. Census Regions and Divisions of the United States.

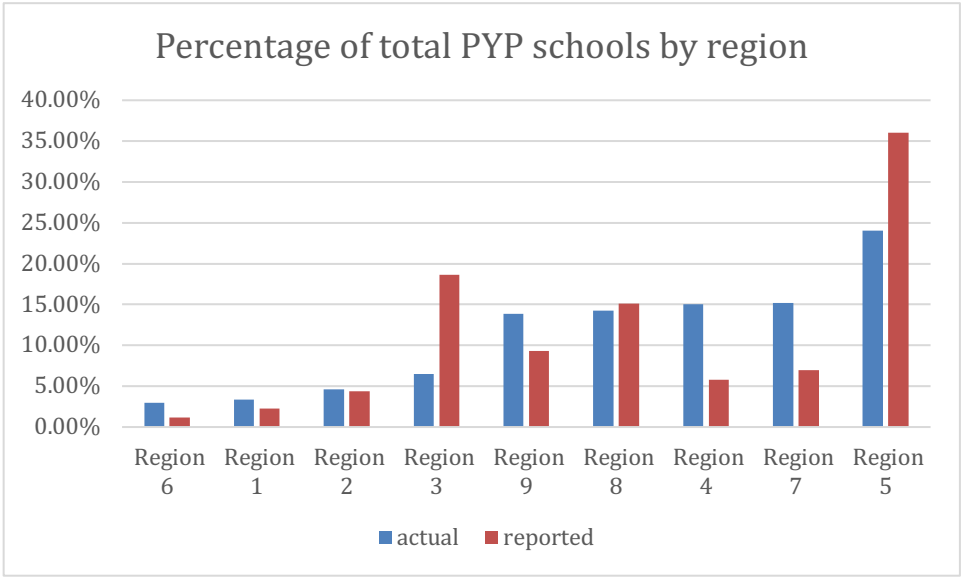

Figure 5. Actual number of PYP Schools per region compared to survey results.

Question **eight**, (Q*8. What type of setting best describes your school? Click all that apply. Urban, Suburban, or Rural.*) For this question, 42 respondents selected "Urban" (48.3%), 44 selected Suburban (50.6%), and 9 selected Rural (10.3%). A map of the addresses of all 539 school addresses indicates that nearly all IB PYP schools

surveyed are located near or in major cities (see Figure 6) indicating the sample was representative of that data.

Figure 6. The location of the 539 IB PYP schools contacted in this study.

Question **nine** asked respondents to select what type of words or phrases the schools uses to identify itself. (*Q9. What type of setting best describes your school? Click all that apply; Public, Private, Religious or Parochial, Charter, Magnet, Virtual/Online school, Boarding, Language immersion school, Special education, IB World School.*) 69 of the schools selected "Public" (80.2%), 10 selected "Private" (11.6%), 2 selected Religious or Parochial (2.3%), 9 selected Charter (10.5%), 11 selected Magnet (12.8%), 0 selected Virtual/Online school (0.0%), 0 selected Boarding (0.0%), 4 selected Language immersion school (4.7%), 4 selected Special Education (4.7%), and 49 selected IB World School (57.0%). On this survey 80.2% of the respondents selected public schools and 11.6% selected private school, comparable to the numbers reported on the IB website of 89% public and 10% private (IBO, 2016a). It is

possible the missing 9% of public schools on the survey chose not to answer question nine.

Questions 10 & 11

Questions **10** and **11** asked the respondents to identify how much time students spend in the art room each week and if their school employs a full-time art specialist.

> *10. How many minutes per week do your students at your school spend in a dedicated visual art lesson?*
> 0-19 (2, 2.3%), 20-39 (7, 8.0%), 40-59 (51, 58.6%), 60-79 (20, 23.0%), 80+ (7, 8.0%)
>
> *11. Does your school employ a full time Visual Arts specialist?*
> *85 Responses*
> 1. yes (69, 81.2%), 2. no (16, 18.8%)

It was found in these questions that most of the schools surveyed do have an art teacher on site, either full time or part time. While a percentage of schools have limited instructional time in the arts, the majority have 40-59 minutes (58.6%) followed by 60-79 minutes (23%).

Discussion of questions 1 through 11

In processing the results of questions **1** through **11**, I determined this survey has reached a variety of experienced art educators from a breadth of PYP schools around the country. Questions **1** through **3** revealed a high number of the respondents with substantial experience in the PYP art room. I interpret this as most of the respondents have experienced a variety of training in the PYP and are comfortable with the IB language and concepts used in my survey. Three respondents even indicated they have worked in the IB PYP for over 21 years, meaning they were working in the first five years of the PYP program. Questions **4**, **5**, and **6** revealed a majority of respondents are certified art teachers, many holding advanced degrees in education. I analyze this as the

schools, districts and states these teachers work in are deemed to be highly qualified as art teachers and provide suitable responses to my survey. Questions **7**, **8**, and **9** revealed a suitable and representative selection of teachers took part in my survey. A balanced distribution of schools, both public and private from all regions of the United States took part in the survey. Questions **10** and **11** asked the respondents to indicate how much art takes place in their schools and if they employed a full-time art teacher. Both of these questions revealed most schools surveyed have regular art instruction. I interpret the demographic section of my survey shows meaningful and representative responses of the typical PYP art teacher's understandings of the practices of their programs.

Questions 12 through 22 – Open-ended questions

The open-ended questions reveal information about how teachers, coordinators and administrators work with and through philosophy of the IB. In the following section, I grouped the responses for questions **12** through **22** into three categories; "*navigating the structure and proprietary vocabulary of the IB*", "*perspectives of the IB as an organization*", and "*how to create student-lead inquiry-based art lessons in the PYP*."

Questions 18, 19, 20, & 22

The first category, which includes questions **18**, **19**, **20**, & **22** (see Figure 7), explores how respondents navigate the structure, terminology, and vocabulary of the IB. Like many organizations, the IB creates and makes use of its own terminology and vocabulary to communicate ideas. These four questions explore how the respondents interact with terms like "big idea," "transdisciplinary theme," and "stand-alone unit." The introductory text of the PYP, "Making the PYP Happen" (2009b), contains lists of words

using descriptors like “attitudes,” “learner profiles,” “key concepts” and is littered with a variety of other IB specific terms. In my personal introduction to the IB, the volume of IB specific vocabulary felt like a foreign language. With these four questions, I sought to understand the ways in which others in the IB understood/interpreted this language, then processed and coded the responses to these questions.

> *18. The IB discusses the use of "Big Ideas" in teaching. Please describe what Big Ideas are in your own words.*
>
> *19. When creating a lesson, are some art mediums better suited to inquiry-based methods than others? (i.e. painting best suits inquiry-based methods because...)*
>
> *20. The IB PYP Transdisciplinary Themes guide all lessons. Do you feel that some work more naturally with art lessons than others?*
>
> *22. In the IB, the term "stand-alone unit" describes lessons taught outside the Unit of Inquiry which are most often skills-based lessons in specialist classes. In what instances do you create stand-alone lessons?*

Figure 7. Questions 18, 19, 20, & 22.

In my experience teaching in an IB school, myself and my colleagues found the learning curve for understanding these terms to be long and arduous. A school colleague might cause confusion during a meeting by using a term with an IB specific meaning *and* an outside meaning in different ways. The responses to these language-driven questions found a range of ideas that in some cases conflicted with each other, pointing to lack of clarity in the PYP’s supporting materials. In analyzing these results, I looked for usage and inferred definitions within the respondents’ answers.

Question **18** directly asked for respondents’ conceptions of the phrase “big idea.” Making the PYP Happen, the official guiding document for the PYP, uses the term “big idea,” although it fails to provide a concise definition (IBO, 2009b). The respondents

provided a range of terms to describe this with phrases like “themes,” “concepts,” “understandings,” “foci,” and “principles” among many others (Appendix C).

Questions **19** and **20** explored the ways in which the respondents used terms like “inquiry-based methods,” “unit of inquiry,” and by asking what materials and themes best lend themselves to inquiry-based instruction. Across the responses, a “unit of inquiry” was described as a lesson plan, a unit plan, or a curriculum.

Question **22** asked respondents to describe the instances in which they use a stand-alone unit. According to the IB, a stand-alone unit is any instruction that takes place outside of units of inquiry (IBO, 2009b). This occurs in the art room when art-specific skills are taught without the guidance of a unit of inquiry (e.g. *Who We Are*). Many of the responses spoke again of time limitations being the biggest hindrance to creating stand-alone lesson plans.

Questions 14, 15, & 21

The second grouping of questions, Questions **14**, **15**, & **21** (see Figure 8), asked respondents to discuss their perspectives of the practices of the IB as an organization. Generally, the IB provides training and access to materials, but representatives from the organization are only required to visit the school every 4 years (IBO, 2016b). In my experience teaching in the IB, the direction of information generally flowed from the top down with minimal opportunities for criticism and dialogue about the problems faced “on the ground.” Questions **14**, **15**, & **21** asked respondents to voice their concerns on how the IB practices interact with the arts and art teachers.

> *14. What are the biggest hurdles in teaching Visual Art in the IB PYP? (This can be in comparison to other curricular models or things you think don't work well in the IB structure.)*

15. The IB considers the Arts as a core subject, to what degree does your school incorporate the visual arts? (% of time per week?) (Number of Specialists?)

21. What does the IB do to help support your work using inquiry-based methods? What could they do better?

Figure 8. Questions 14, 15, & 21

Within the responses to questions **14**, **15**, and **21**, I received a range of opinions, both negative and positive, about the IB as an organization and as a curriculum. Question 15 asked if their schools considered art a core subject, and overwhelmingly the responses were negative. Many complained they had insufficient time in the classroom to follow the curriculum, citing this lack of time as proof the IB does not consider art a "core subject." One respondent described the IB as a "business, run by a business model" going on to describe the IB as a bad fit for their school.

The negative responses to question **14**, which ask what are the "biggest hurdles to teaching art in the IB," described the state of "confusion" with the IB curriculum and difficulty in balancing the many different items at hand. Many respondents cited the lack of time in the art class as the biggest hurdle, claiming they had less time with students than other classes. The third largest source of frustration was the lack of collaboration between themselves and other teachers. One cited a lack of "buy in" from other teachers at their school, while another respondent described art as a "superficial add on to homeroom activities."

Question **21** asked respondents to describe where they need the most amount of help from the IB to better their inquiry-based methods. The majority of responses for this question indicated access to training and reliable IB created resources as the things the IB

needs to work on the most. In the responses about a lack of training, many cited their physical distance from training sites or a lack of funding to receive IB training as a major obstacle. IBO.org, the official resource website for IB teachers, was criticized across the responses regarding resources as being insufficient and unorganized. 51 of the responses (58.6%) to this were critical of the IB practices, 19 (21.8%) stated they were happy with the program the way it is, and 17 (19.5%) left the response blank. In the responses that were critical, there were 20 mentions of a desire for more professional development training, many calling for more visual arts specific training. In this same group of negative responses, there were 22 mentions of a need for more succinct resources. Respondents stated they desire webinars, online resources, lesson plan examples, and more resources that are specific to visual arts.

Questions 12, 13, 16, & 17

The third section of responses is made up of Questions **12, 13, 16,** & **17** (see Figures 9 and 10), which revealed the most useful information from this survey about how student driven inquiry-based methods are implemented in the PYP. The IB states in their guiding documentation that student-lead, inquiry-based lessons are the foundation of their program (IBO, 2016a). Questions 12, 13, and 17 asked respondents about their understandings of inquiry-based methods and student voice by eliciting examples of classroom practices. Question 16 asked for the most useful resources the respondents used in creating these kinds of lessons.

Question **16** (see Figure 9) asked the respondents to identify the sources they use to acquire materials and resources for their inquiry-based lessons. As this survey was

meant to discover how art teachers approach and create inquiry-based methods in the art room, it was important to find the sources they rely on to create these lessons.

> *16. Where do you look for information for creating inquiry-based lessons? Pinterest (56, 66.7%), Internet Searches (56, 66.7%), Art of Ed (34, 40.5%), IBO.org (32, 38.1%), Other (29, 34.5%) Facebook (13, 15.5%) NAEA Publications (18, 21.4%)*

Figure 9. Question 16.

The responses from this question revealed a heavy reliance on *Pinterest*, Internet search engines, and the *Art of Ed* website (www.theartofed.com) instead of the official IB website's resource, IBO.org. Hypothetically, the IB's official resources should be first on the list for this response. As an international organization with schools in on six continents, a centralized resource would help them control the shape and direction of their product greatly.

Questions **12** and **13** ask for the respondents to describe classroom practices, and question **17** asks for their understanding of TAB (Teaching for Artistic Behavior).

> *12. The IB defines itself as an inquiry-based program, how do you define inquiry-based Methods. Provide examples if possible.*
>
> *13. The IB states that curriculum should be driven by student interest. How do your students contribute to the shape and direction of your curriculum? Provide examples if possible.*
>
> *17. TAB (Teaching for Artistic Behavior) or Choice-Based Art Education is defined as "studio students are regarded as artists. Students are expected to do the work of artists, directing their own learning." How do TAB or Choice-Based methods compare to the methods of the IB?*

Figure 10. Questions 12, 13, & 17.

The responses from questions 12, 13, and 17 ultimately provided the most useful information from this survey. The following section describes how these responses were

organized, coded and evaluated to understand how inquiry-based methods are realized in the typical IB PYP art classroom in the United States.

Questions 12, 13, & 17: Coding for Student-Lead, Inquiry-Based Instruction

As previously described in the literature review, Banchi and Bell's (2008) *Levels of Inquiry* defined four levels of inquiry-based instruction: Confirmation, Structured, Guided and Open Inquiry. In this article, the authors described how three components to lesson design are removed in steps, moving across the four levels of inquiry-based learning (see Figure 11). These three components, and the corresponding four levels of inquiry-based instruction will serve as the basis for the coding the responses to questions 12, 13, and 17.

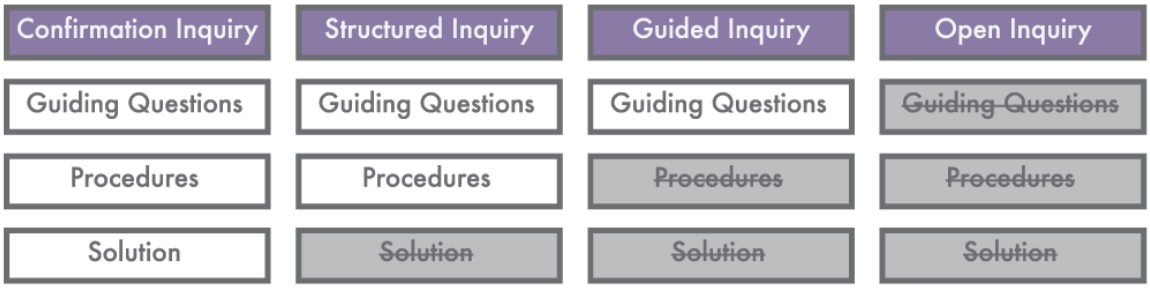

Figure 11 – Banchi & Bell's Inquiry Levels. Illustration by Author.

The second part of the coding process assesses the language of the responses for their degree of student and teacher involvement in the learning process. The wording of the responses as well as the descriptions of the activities in class are coded for student driven, teacher driven or neutral language (see Figure 12). The two coding systems are then combined to make conclusions about the practices of the respondents.

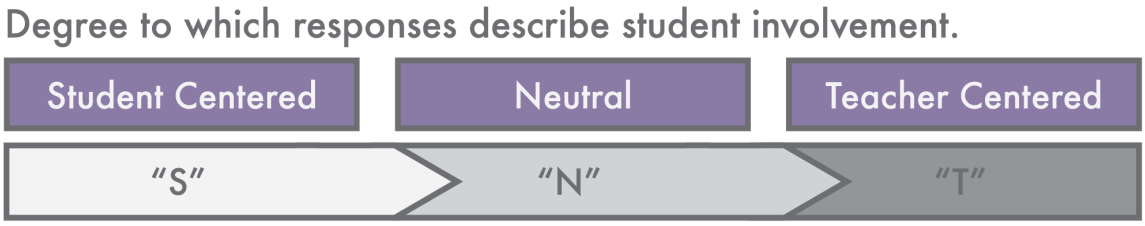

Figure 12. Degree of Student and Teacher Involvement in a Lesson

Components of an Inquiry-Based Art Lesson

The first step for coding the responses **12, 13, & 17** from the survey required translating the component terms as described by Banchi & Bell (2008) to more art centered language (see Figure 13). The terms questions, procedures and solutions as described in the article were originally used in the context of a science classroom. Translating these terms eases the process of assessing the language found in the survey responses.

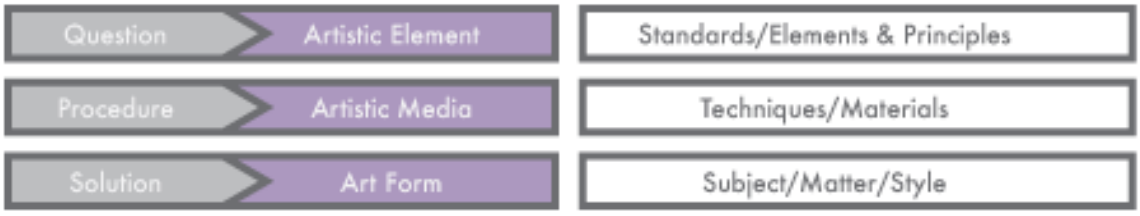

Figure 13 – Science terms converted to Art Terms

The first term, "guiding questions," is well suited to disciplines with succinct end results like math and sciences. A chemistry experiment or a geometry equation generally has definitive answers. The term "artistic element" or "element" is a more suitable term in this case as it points to the fundamental artistic visual terms such as the elements and principles. Conceptual terms like balance, line, or color have traditionally been used to guide explorations in the arts, and will act as questions in our case.

The term "procedure" might be suitable on its own in the art room, as many investigations make use of *procedural* elements. Procedure might be used synonymously with art terms like 'technique' or 'method.' It may also be used to describe how a particular art material is handled. While the term "medium" is used to describe common art materials, it may also refer to the common practices used with those materials. 'Watercolor painting' refers to both the material itself and the process for its technique application. For the purposes of this study, the plural term "Media" will replace procedure.

The phrase "Solution", used in the sense of solving a problem, also has parallels in the art room. An artist might deal with problems of a visual nature like composition, or technical ones like mixing media effectively. This term points to an end result of an artistic inquiry and can describe a variety of instances. When discussing the visual arts, many different solutions are historically offered via different artistic movements or styles. Creating an effective image of the outdoors might be found through exploring "landscape." Pure emotive expression might be found when researching "abstract expressionism." Replacing the term "Solution" with the concept of "style" or the broader term "Art Form" or "Form" describes both instances.

Levels of Inquiry in the Art Room

Thinking to my own experiences in the classroom, *concept*, *form* and *media* are more accurate descriptions of the components of an art lesson versus *question*, *procedure* and *solution*. The presence or absence of these terms indicates of the level of student inquiry in a lesson. A common type of lesson found in the art room may involve a student

following the practices of a famous artist. A student might be asked to confirm the color harmonies found in an impressionist style painting, with paint as a media. This follows the "confirmation inquiry" level of inquiry-based instruction.

If we remove the explicit instruction of an art form, we arrive at the next step of inquiry-based learning, "structured inquiry." A student may explore a medium and an elemental artistic concept without the limitations of a particular art form.

Removing the third component "media" advances to the next step of inquiry, "guided inquiry." A student may explore a conceptual element or principle, but be freed of the constraints of a material or technique. This layer of inquiry dissolves the boundaries of materials and opens the inquiry to much wider possibilities.

The final and most free form of exploration, "open inquiry" is accessed when the students are exploring their own individually created artistic conceptual challenges. Open inquiry limits the role of the teacher and allows students to guide all three components of their learning in the art room.

Student-Driven Inquiry

The second factor for coding the answers provided by the participants revolved around the degree to which the inquiry is student-driven. The aforementioned levels of inquiry rely heavily on student independence and according to the IB should be "student driven." A teacher might create a lesson asking students to create their own line of inquiry, and explore it freely across a variety of art media and free of stylistic constraints. While on the surface this appears to be a truly open form of inquiry, the degree to which the teacher intervenes should be noted. Has the teacher performed a demonstration of the assignment which inadvertently or subconsciously affects the student process? Has the

teacher directly asked the student to create the artistic concepts they follow? If a teacher dictates the inquiry, is it inquiry after all? There is a nuanced distinction between student-driven inquiry versus the outward appearance of such.

Coding the Responses

This process of analysis relies on a method of interpreting the data using open coding, a qualitative method of analyzing data for '*in vivo'* concepts to code data (Grbich, 2013, p. 83), as opposed to a reproducible quantitative scientific process. As this survey is exploring a mostly subjective and abstract concept with many different and overlapping viewpoints, the coding process similarly makes use of subjective processes. However as imperfect as this process is, some useful assumptions made about the language in the responses. The descriptions of classroom practices found in the answers to questions 12, 13, and 17 were coded both for the level of inquiry described and the degree to which student's voice is considered.

Example of Coding for Inquiry Level

Although question **12** is the only instance where the respondent's understanding of inquiry-based methods is directly asked, the other open-ended questions also reveal insight into their thinking regarding inquiry-based practices. The responses describe a range of lessons, experiences and methodologies which were sorted and coded based on the use of language and the activities described. Using the levels of inquiry, updated with the art descriptors (see Figure 14) used to code the respondents' answers.

In question **12**, "Respondent 12" described their understandings about inquiry-based instruction using a description of their teaching philosophy and examples of

classroom activities (see Figure 15). The first item noted was the respondent's use of the term "concepts." Although concepts might refer to the elements and principles of art and design, specific state or curricular standards, or other artistic ideas: some amount of thematic influence on the students can be inferred. This is not viewed as a negative trait, but simply noted as an influencing factor might guide the work created by students.

In the same answer, the word highlighted in green, "Activities," was correlated with the term "Art Media." The term "activities" suggests students were given a prompt or guidelines for creating an object in the art lesson. Although this could be an activity making use of multiple forms of media, the term activity suggests the teacher has put some amount of thought in the work students are enacting prior to class. This term infers there is some amount of structure in the student inquiry.

The final phrase highlighted in Respondent #12's answer was "examining art," which I interpreted as they viewed works of art and art forms previously created by professional artists. Although vague, this response was counted as an example of "art form" as the students are being exposed to the work of others. If the students are viewing the style and work of another artist, they might be confirming forms and concepts already established in art history.

This example respondent described all three of the major components of an art lesson as I have described in my translation of Banchi and Bell's (2008) levels of inquiry. The three elements combined in this answer were coded as being a representative of "Confirmation Inquiry," where students confirm previously established concepts, media and forms of art. The level of inquiry found in this example is retained and the level of student centered language is then assessed.

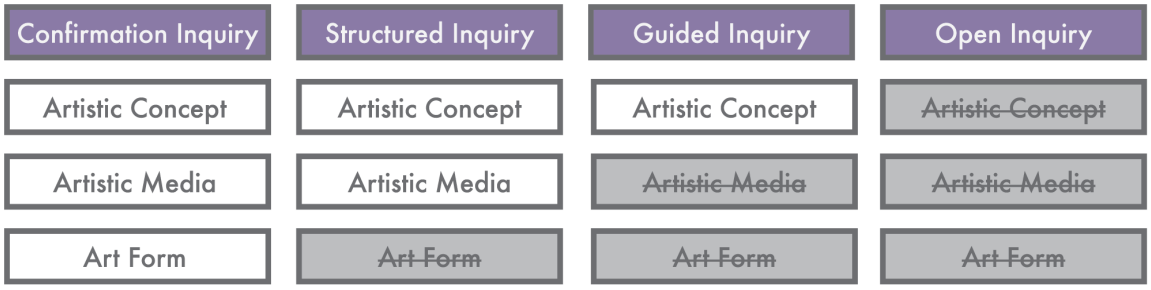

Figure 14. Levels of Inquiry in the Arts

12. The IB defines itself as an inquiry-based program, how do you define inquiry-based Methods? Provide examples if possible.

•Respondent #12•

I help guide my students through their own artistic inquiry. We begin by examining art and concepts, then students go through activities to develop their own ideas, and create and refine their own projects culminating in a reflection.

Art Concept *Art Media* *Art Form*

Figure 15. Question 12 coded for lesson components.

Example of Coding for Student Centered Language

For coding the degree to which the response positions the teacher as guiding the experience, a simple three step scale is used: *S* - for Student-centered, *T* for teacher centered, and *N* for Neutral (see Figure 16).

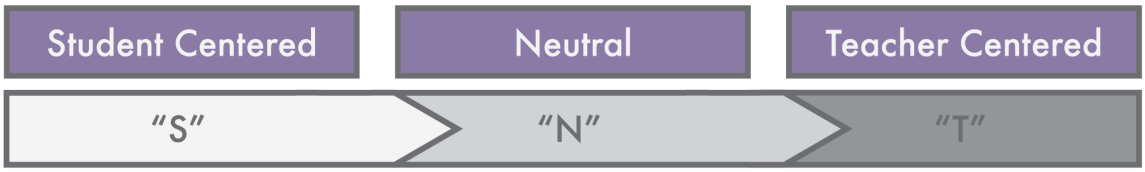

Figure 16. Degree to which responses describe student involvement.

Respondent #12's answer for question **12** (see Figure 17) uses a mix of language positioned from both the teacher and the student's perspective. The first sentence begins with the phrase "*I help guide my*," in which "*my*" infers possessive qualities and "*guide*" infers direction lead by the teacher. The same sentence includes the phrase "*their own,*" the structure of the thought is centered in the teacher's role. This sentence is predominantly positioned in from the teacher's perspective and is coded as **Teacher Centered**.

The second sentence begins with "*We begin by examining*," which again positions the teacher as guiding the classroom. This sentence is balanced out with the students "*developing their own ideas and create and refine their own projects*." The second sentence has a balance of both teacher and student-centered language, and is marked as **Neutral**.

Combining the assessment of the two sentences, the language predominantly leans toward being centered in the teacher's position, so this answer was coded as "teacher centered language."

12. The IB defines itself as an inquiry-based program, how do you define inquiry-based Methods? Provide examples if possible.

•Respondent #12•

I help guide my students through their own artistic inquiry. We begin by examining art and concepts, then students go through activities to develop their own ideas, and create and refine their own projects culminating in a reflection.

Teacher Centered Language. *Neutral* *Student-Centered Language*

Figure 17. Question 12 coded for teacher-centered and student-centered language.

Combined Coding for Student-Centered Language and Inquiry Level

After coding the responses for both the degree of student centeredness and the level of inquiry, the two sets of data were combined into one chart (see Figure 18).

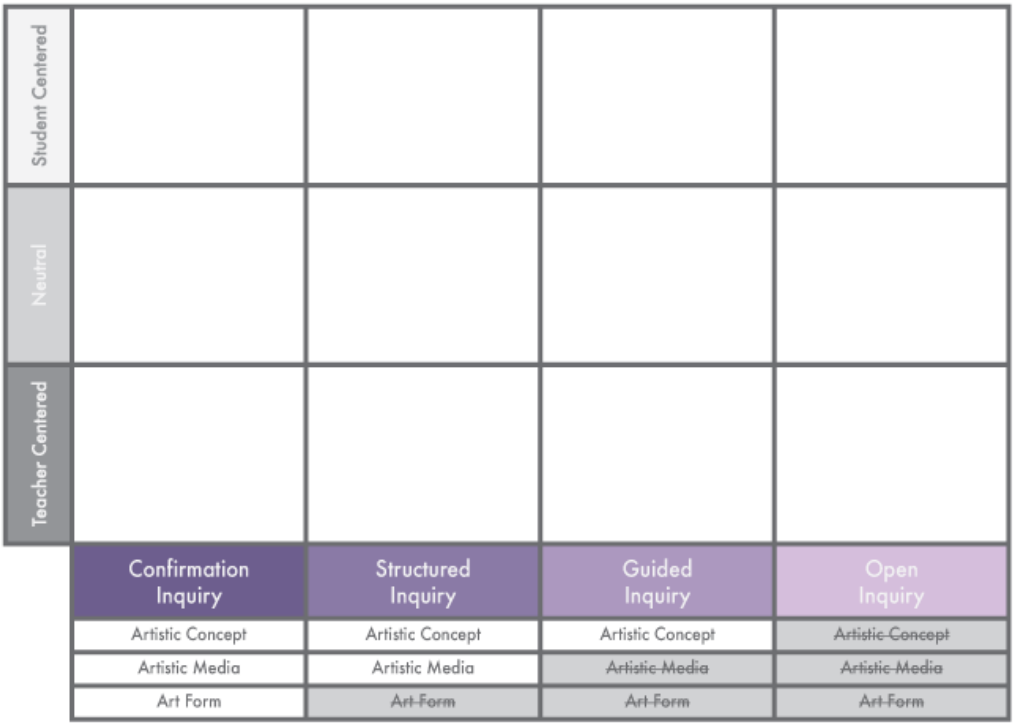

Figure 18. Chart for coding responses.

The degree to which the teachers used student-centered language is along the y-axis and the level of inquiry along the x-axis. As the results were coded, the respondents' identifying numbers are placed in their corresponding box on the charts. The identifying number a numeral for when the respondent participated in the survey chronologically, numbers 1 through 86. The data from question one, "*What is your role at school",* was then overlaid onto the numeric identifiers for questions 12, 13, and 17 (see Figures 19-21).

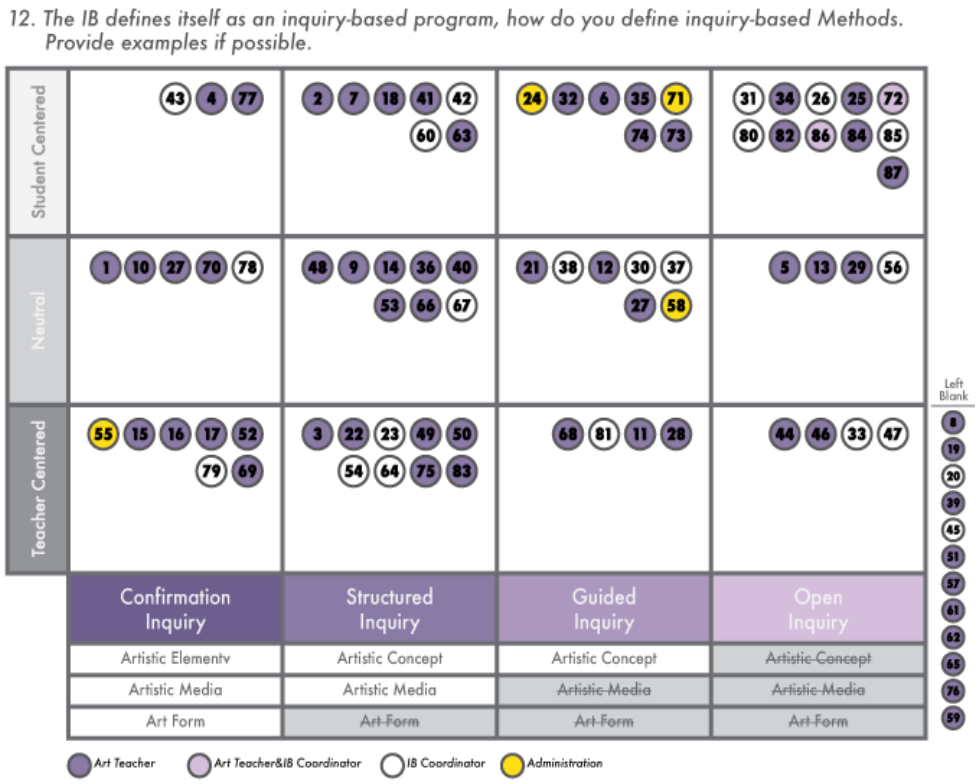

Figure 19. Responses for Question 12 Coded for Job Title.

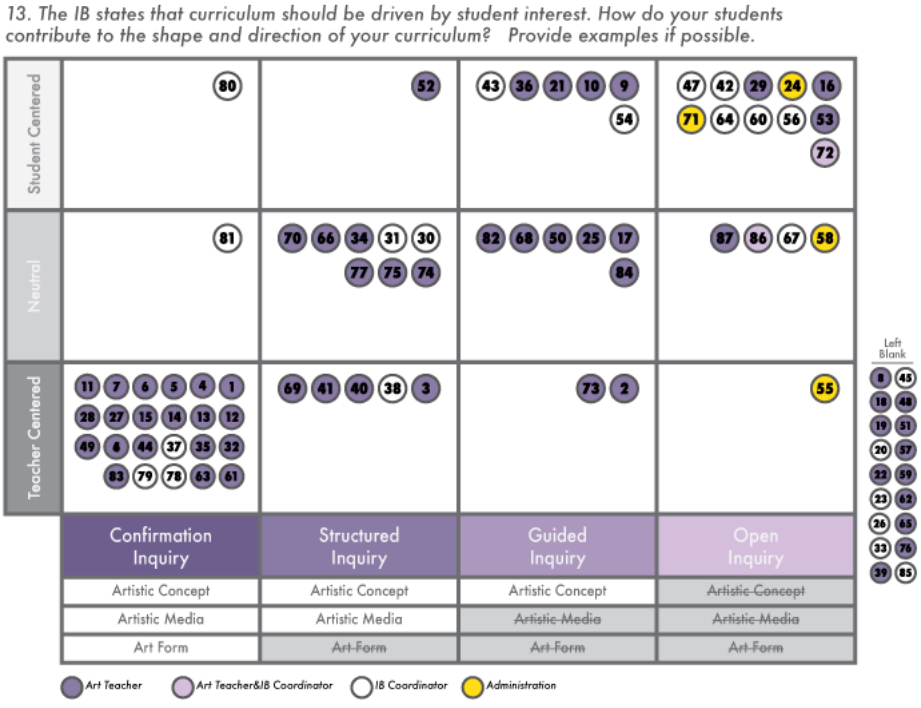

Figure 20. Responses for Question 13 coded for level of inquiry and job title.

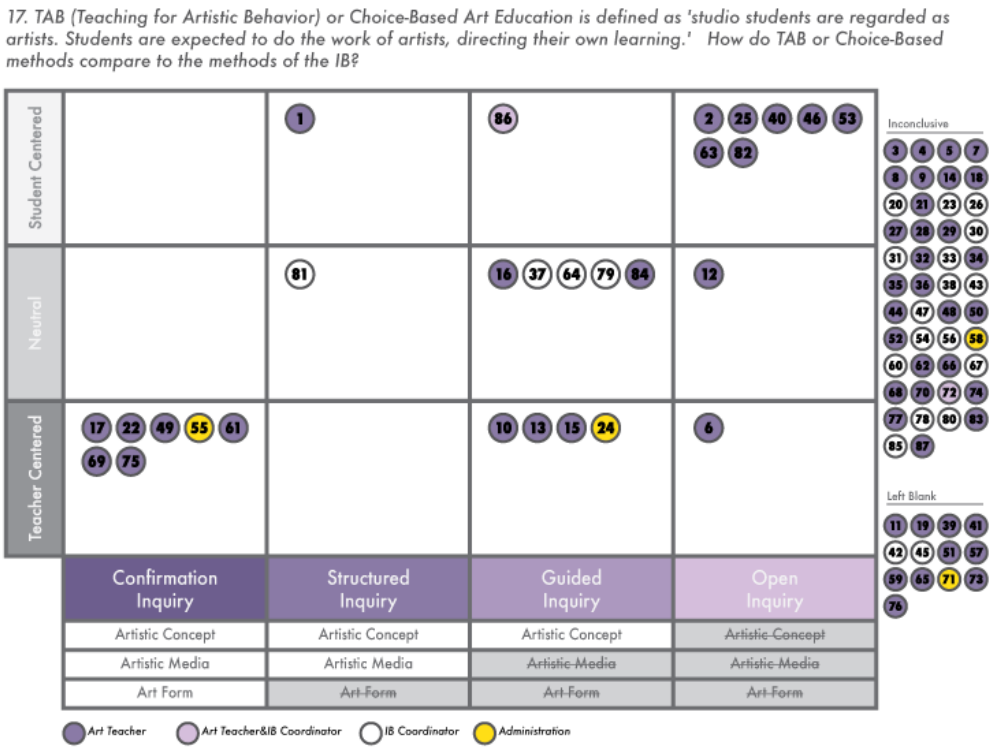

*Figure 21. Responses for **Question 17** coded for level of inquiry and job title*

Chapter 5: Discussion and Conclusion

Discussion of Question 12

The responses to question **12** (see Figure 19) shows an even spread of responses across both axes of the grid. In describing what an inquiry-based lesson looks like, respondents described a full range of classroom activities from simple "make-and-take" lessons all the way to full student autonomy in student art making. When coding the responses for level of inquiry, 15 of the respondents (17.2%) describe classroom practices that matched the description of a *confirmation inquiry* level of instruction; 21 respondents (24.3%) describe *structured inquiry*, 18 respondents (20.6%) describe *guided inquiry*, 29 respondents (33.3%) describe *open inquiry*, and the remaining 12 responses (13.7) were left blank. When coding questions **12**'s data for student-centered and teacher-centered language; 28 respondents (32%) use student-centered language, 24 respondents (27.6%) use neutral language, 24 respondents (27.6%) use teacher-centered language, and the remaining 12 responses (13.7) were left blank.

Looking at the data from question **12**, it can be inferred a majority of the respondents have some concept of how student-driven inquiry-based instruction takes shape in the art classroom. 60 respondents (60.9%) describe lessons ranging in inquiry level from *structured inquiry* to *open inquiry*, which can be interpreted that many of the teachers are able to describe inquiry-based methods to some degree. In reexamining the data, I only came across two instances of respondents describing different levels of inquiry. This data shows most of the respondents have some conception of inquiry-based methods, but the idea of a sliding scale of inquiry is not a commonly used concept.

Discussion of Question 13

Question **13** asks respondents to describe how and to what degree student voice drives their curriculum. When coding the responses for level of inquiry, 22 of the respondents (25.2%) describe classroom practices matching the description of a *confirmation inquiry* level of instruction; 14 respondents (16%) describe *structured inquiry*, 14 respondents (16%) describe *guided inquiry*, 16 respondents (18.3%) describe *open inquiry*, and the remaining 18 respondents (20.6%) left the question unanswered. In coding questions 12's data for student-centered and teacher-centered language, 19 respondents (21.8%) use language indicating *student-centeredness*; 19 respondents (21.8%) use language indicating being *neutral*; 31 respondents (35.6%) use language indicating *teacher-centeredness*, and 18 respondents (20.6%) left the response blank.

Although many responses for question **13** speak of lesson examples where students had some amount choice, only 11 respondents (12.6%) were coded as student-directed, open inquiry. As the question asked for descriptions of how students drive inquiry, it is notable only a small percentage of respondents could describe scenarios where full control of the classroom is ceded to the students.

Discussion of Question 17

Question **17** asked respondents about their familiarity with TAB (Teaching for Artistic Behavior), an example of an inquiry-based instructional method recently featured in art education publications and conferences (Gates, 2016; Hathaway, 2013; Kirk, 2018; Teaching for Artistic Behavior, Inc., 2018, Douglas & Jaquith, 2009). 28 respondents (32.1%) describe lessons based on the literature of TAB, 46 respondents (52.8%) did not know of the program, and 13 respondents (14.9%) left the question blank. Of the 28 respondents who described how TAB and the PYP relate, the responses spread fairly

evenly across the axes of student-directedness and level of inquiry described. The only found concentration was 52.8% of respondents who had not heard of the program. I interpret this number as the typical PYP art teacher does not search publications in the field of art education as a resource for lesson planning. As previously shown in question 16, many of the respondents look to Pinterest, Facebook, and internet searches for resources. As such, it is surprising such a large percentage of respondents did not know Teaching for Artistic Behavior although it is found in publications by the National Art Education Association (Gates, 2016; Hathaway, 2013; Kirk, 2018) and maintains 8,747 followers on a Facebook page (Teaching for Artistic Behavior, n.d.).

The responses to questions twelve, thirteen, and seventeen, reveal a wide range of understandings of student-driven inquiry in the art room. Overlaying job title information, reveals all levels of a school faculty can have a range of understanding of these inquiry-based components. Looking to these results, one can clearly see that the range of understanding of inquiry-based teaching is diffuse and wide. The IB documents described as being vague to give schools more autonomy, are strong indicators why understandings vary so widely.

Findings Summary and Further Research

In creating this survey, I was guided by my hypotheses about the ways IB PYP art teachers would create and enact inquiry-based methods in the art room. These ideas shaped the questions I created for this survey and shifted as I learned more about the ideas other teachers find important for creating their lessons. In analyzing the data, some of the questions were undoubtedly more useful than others. Questions **12**, **13**, and **17** were the most valuable in both learning about what student-led, inquiry-based methods mean to the typical PYP teacher. In the beginning stages of creating this survey, I thought concepts like *stand-alone units* (**Q22**) and *big ideas* (**Q18**) would have more importance, but the participants responded in ways expressing less emphasis. I also theorized that certain artistic *mediums* (**Q19**) and the *transdisciplinary themes* (**Q20**) would have be more influential in guiding lessons in the inquiry process, but found inconclusive results. I did, however, find that many of the respondents found the desired *resources* (**Q21**) and *hurdles* (**Q15)** they faced to be a valuable for a direction to head with further research. Certainly more research needs to be done in ways that can best aid art teachers in understanding and creating inquiry-based lessons.

After the conclusion of this research, I attended Kok Boom Lim and Victoria Loy's (2018) presentation at the National Art Education Conference on teacher resources for implementing inquiry-based methods in the art rooms of Singapore. Although their research focused specifically on the public school system in Singapore, the skills they are training teachers are highly relevant for everyone who aims to train teachers in inquiry-based methods and would prove highly useful to teachers in the IB. Lim and Loy's (2018) research included physical resources including books, guides and game-like cards,

which teachers used to create their own inquiry-based lessons in the art room. The respondents in my survey expressed desire for exactly these types of resources. A follow up research to this study might look for other ways in which educators are creating resources outside of the United States. The scope of this survey only looked within one country, but a follow up might find more resources to share with other teachers. As I transition back to a teaching position, I intend to continue searching for the ways in which teacher in the United States and abroad make use of these methods, and continue refining the matrix I used to analyze the ways inquiry takes shape in the classroom. This starts with creation of both lesson resources and training materials for other art teachers who face similar challenges to my own.

Conclusion

Through conducting this research, I analyzed a wide range of voices from the teachers, coordinators, and administrators who truly make the PYP happen. I saw many similarities in my own understandings, experiences and frustrations as a IB art teacher in these responses. Many noted the shortcomings of resources, trainings, documentation, the unit planners and other elements that I also encountered as a teacher. Other respondents showed a fierce loyalty to the IB, stating the guiding materials are perfectly understandable. Both sentiments make sense to me after teaching in the program for four years, but the vast differences in the responses of this survey certainly point to some limitations in the training and resources provided by the IB.

In reading the guiding documents of the IB, I keep wondering how a more concrete definition of student-driven inquiry might aide teachers in better understanding the IB brand of inquiry-based methods. A common refrain in the responses to this survey

was one describing inquiry-based instruction as a "natural fit" with the arts. Many of these same respondents go on to describe a series of limiting factors they insert into their lessons, which is the polar opposite of student-driven inquiry. Giving a student choice only in the subject matter of an art lesson does not equal a student-driven lesson, and the IB might benefit from directly stating this in their documentation. The student-driven component is an essential element of inquiry-based methods, and is completely dependent on the student having control over as many of the lesson variables as possible– to the point where the student experience might transcend the traditional conceptions of the art classroom lesson. This release of teacher authority may be an uncomfortable component to the inquiry-based method, and teachers require additional support, resources and training to reach this goal.

Looking to other schooling models making use of inquiry-based methods as a basis for instruction might serve as a useful starting point to assist the PYP art teacher. The inquiry-based instructional methods used in Montessori schools make use of sensory materials as a means of creating guided inquiry interventions for students. These could be a great model for creating inquiry in the art room. What sample lessons could the IB provide the PYP art teacher that mirror the sensory materials experience of the Montessori program? Example lessons could make use of the materials already found in the art room; brushes, pencils, paper– but mimic the guided exploration found in Montessori schools. The Reggio Emilia and Waldorf Schools make use of repetitive observations and questioning processes, which familiarizes students with many reoccurring opportunities for open inquiry. Could the IB provide a more succinct framework for encouraging student questions as a means of creating open inquiry? When

looking back on the resources and materials provided by the IB, the scope of what can be implemented is vast and wide. These materials are broad, it is sometimes hard to know where to start. Having a starting structure for students and teachers to follow in the early years of the program might help familiarize them with the openness of an inquiry-based method.

The continuum showing the levels of inquiry in the arts (see Figure 14) created for evaluating the responses to this survey has proven itself useful in advancing my own understanding of this subject. Expanding, reformatting, and shuffling the different elements of this chart is helpful for me to understand the many elements making up an art lesson. Visualizing the concept, the media, and the art form are useful in the discussions I have about the art room, and guide the lesson plans I continue to create. Having a subject specific tool to evaluate how much influence teachers have over student voice in the art room could be useful for art teachers.

This study, although intended to broadly improve the practice of art teachers, ultimately provides only limited insights into how teachers understand and enact inquiry-based curriculum. In executing this study, I intended to create a window into as many art classrooms as possible and understand the practices of others so they may improve my own (and anyone who is interested in reading this). The limitations of geographic distance between IB schools and complications of visiting a school may be alleviated by, in theory, simply asking the right questions to the right people and sharing that information as widely as possible. In my time in the PYP, I met many art teachers who were reluctant to share their personal practices simply because of the competitive and proprietary nature of working in a private school. The IB creates many opportunities for

teachers in the private school world to share lessons and resources via online forums and conferences, but when schools are competing for the same student pool for enrollment, there is a reluctance to share. However, the IB is now rapidly expanding into the public-school sector, opening more opportunities for the "community of learners" that Jennifer Giddings (2013) described in her history of the program (p.14). Albeit limited in its scope, this survey shows art teachers working within the IB are eager to learn how to become better teachers and are willing to share their successes with a greater community of learners.

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Appendix A: Letter to Respondents

Attn: PYP Art Teachers, Coordinators and Admin.

Hello,

My name is Andrew Bell, and I am a graduate student in the VCUarts Department of Art Education at Virginia Commonwealth University. Thank you very much for giving me the opportunity to explain my research project, "Inquiry-based Instructional Methods in the PYP Art Classroom."

The purpose of this research is to study how teachers, coordinators and administrators define the term "inquiry-based instruction" and to what degree they make use of this style of teaching in their practice. As a former PYP and MYP art teacher, I encountered many different viewpoints on the meaning and value of this term in our field. I feel that the literature provided by the IBO is vague when it comes to this, especially for its meaning in the art classroom. By surveying how teachers define "inquiry-based instruction" I hope to create a resource that informs our community to the many meanings and techniques being applied by teachers across the country.

The survey is 22 questions long and participation is completely optional. I expect it will take 20-30 minutes to complete. All responses will be kept anonymous with no identifiers retained so you may answer the questions as honestly as possible. If you are willing to participate in this survey, please access it at the following link

https://redcap.vcu.edu/surveys/?s=JT3W74F4YX

You may forward this survey to another party if you feel they might also be interested in participating.

The results of this survey will be made available upon completion if requested. If you have any questions about the survey please see my contact information below.

Thank you very much in advance for your time and support.

Best,
Andrew Bell

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Appendix B: Survey Questions

1.What is your role at school?
87 Responses
Art Teacher (60, 68.2%), Art Coordinator (1, 1.1%), PYP Coordinator (25, 28.4%), MYP Coordinator (3, 3.4%), Administration (3, 3.4%), Principal (2, 2.3%), Other (4, 4.5%)

2.Number of years teaching?
87 Responses
1. 0-5 (12, 13.6%), 2. 6-10 (18, 20.5%), 3. 11-15 (16, 18.2%), 4. 16-20 (17, 19.3%), 5. 21-25 (10, 11.4%), 6. 26-30 (8, 9.1%), 7. 31+ (7, 8.0%)

3.IB Individual Program Experience
87 Responses
PYP
1. 0 Years (6, 6.9%), 2. 1-5 (27, 31.0%), 3. 6-10 (38, 43.7%), 4. 11-15 (10, 11.5%), 5. 16-20 (3, 3.4%), 6. 21+ (3, 3.4%)

MYP
1. 0 Years (16, 57.1%), 2. 1-5 (7, 25.0%), 3. 6-10 (5, 17.9%), 4. 11-15 (0, 0.0%), 5. 16-20 (0, 0.0%), 6. 21+ (0, 0.0%)

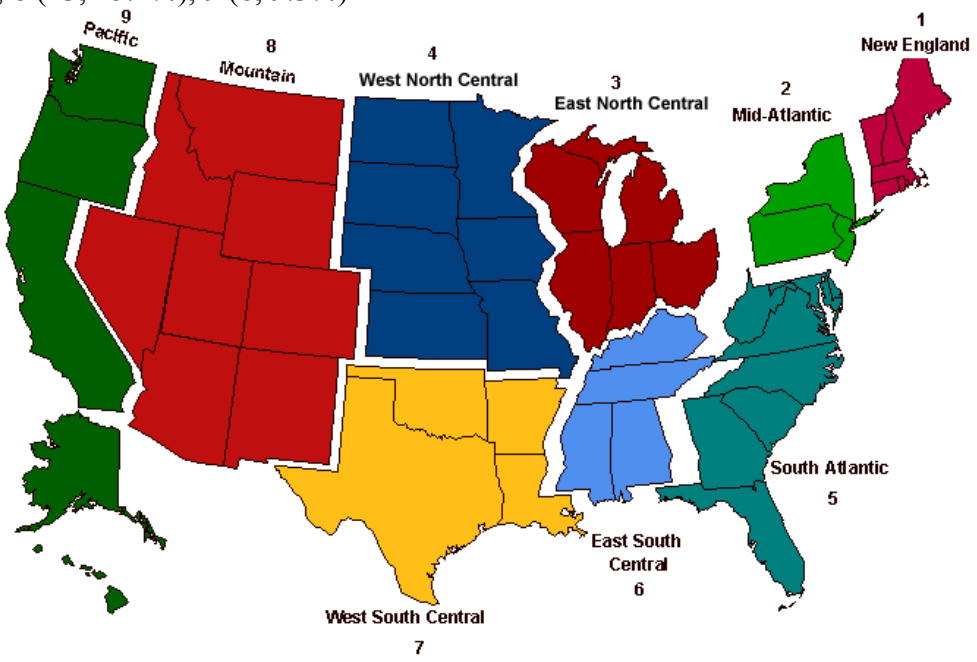
DP
1. 0 Years (15, 83.3%), 2. 1-5 (3, 16.7%), 3. 6-10 (0, 0.0%), 4. 11-15 (0, 0.0%), 5. 16-20 (0, 0.0%), 6. 21+ (0, 0.0%)

4. What is the highest level of education in which you have earned a degree?
83 Responses
Associates (0, 0.0%), Undergraduate (29, 33.7%), Graduate (48, 55.8%), Doctoral (6, 7.0%), Post Graduate (3, 3.5%)

5. What was your major area?
77 Responses
Associates: Art Education (5, 45.5%), Fine Arts (BFA, MFA, etc.) (4, 36.4%), Art History (0, 0.0%), Education (2, 18.2%), Other (2, 18.2%)
Undergraduate*:* Art Education (30, 39.5%), Fine Arts (BFA, MFA, etc.) (24, 31.6%), Art History (8, 10.5%), Education (24, 31.6%), Other (14, 18.4%)
Graduate*:* Art Education (16, 27.1%), Fine Arts (BFA, MFA, etc.) (6, 10.2%), Art History (1, 1.7%), Education (33, 55.9%), Other (11, 18.6%)
Doctoral*:* Art Education (0, 0.0%), Fine Arts (BFA, MFA, etc.) (0, 0.0%), Art History (0, 0.0%), Education (5, 71.4%), Other (2, 28.6%)
Post-Graduate: Art Education (0, 0.0%), Fine Arts (BFA, MFA, etc.) (0, 0.0%), Art History (0, 0.0%), Education (4, 80.0%), Other (1, 20.0%)

6. Are you Certified to teach? If so, what type of certification do you have?
87 Responses: **Yes** (83, 95.4%), **No** (2, 2.2%), **Unanswered** - (2, 2.2%)

7. What region of the US is your school in?
86 Responses
1 (2, 2.3%), 2 (4, 4.7%), 3 (16, 18.6%), 4 (5, 5.8%), 5 (31, 36.0%), 6 (1, 1.2%), 7 (6, 7.0%), 8 (13, 15.1%), 9 (8, 9.3%)



8. What type of setting best describes your school? Click all that apply
87 Responses
Urban (42, 48.3%), Suburban (44, 50.6%), Rural (9, 10.3%)

9. What type of setting best describes your school? Click all that apply
Public (69, 80.2%), Private (10, 11.6%), Religious or Parochial (2, 2.3%), Charter (9, 10.5%), Magnet (11, 12.8%), Virtual/Online school (0, 0.0%), Boarding (0, 0.0%), Language immersion school (4, 4.7%), Special education (4, 4.7%), IB World School (49, 57.0%)

10. How many minutes per week do your students at your school spend in a dedicated visual art lesson?
87 Answers
0-19 (2, 2.3%), 20-39 (7, 8.0%), 40-59 (51, 58.6%), 60-79 (20, 23.0%), 80+ (7, 8.0%)

11. Does your school employ a full time Visual Arts specialist?
85 Responses
1. yes (69, 81.2%), 2. no (16, 18.8%)

16. Where do you look for information for creating inquiry-based lessons?
84 responses

Pinterest (56, 66.7%), Facebook (13, 15.5%), Art of Ed (34, 40.5%), IBO.org (32, 38.1%), NAEA Publications (18, 21.4%), Internet (56, 66.7%), Other (Please list specific titles and sources below if possible) (29, 34.5%)

Open Response Questions

12. The IB defines itself as an inquiry-based program, how do you define inquiry- based Methods. Provide examples if possible.

13. The IB states that curriculum should be driven by student interest. How do your students contribute to the shape and direction of your curriculum? Provide examples if possible.

14. What are the biggest hurdles in teaching Visual Art in the IB PYP? (This can be in comparison to other curricular models or things you think don't work well in the IB structure.)

15. The IB considers the Arts as a core subject, to what degree does your school incorporate the visual arts? (% of time per week?) (Number of Specialists?)

17. TAB (Teaching for Artistic Behavior) or Choice-Based Art Education is de ned as "studio students are regarded as artists. Students are expected to do the work of artists, directing their own learning." How do TAB or Choice-Based methods compare to the methods of the IB?

18. The IB discusses the use of "Big Ideas" in teaching. Please describe what Big Ideas are in your own words.

19. When creating a lesson, are some art mediums better suited to inquiry-based methods than others? (i.e. painting best suits inquiry-based methods because...)

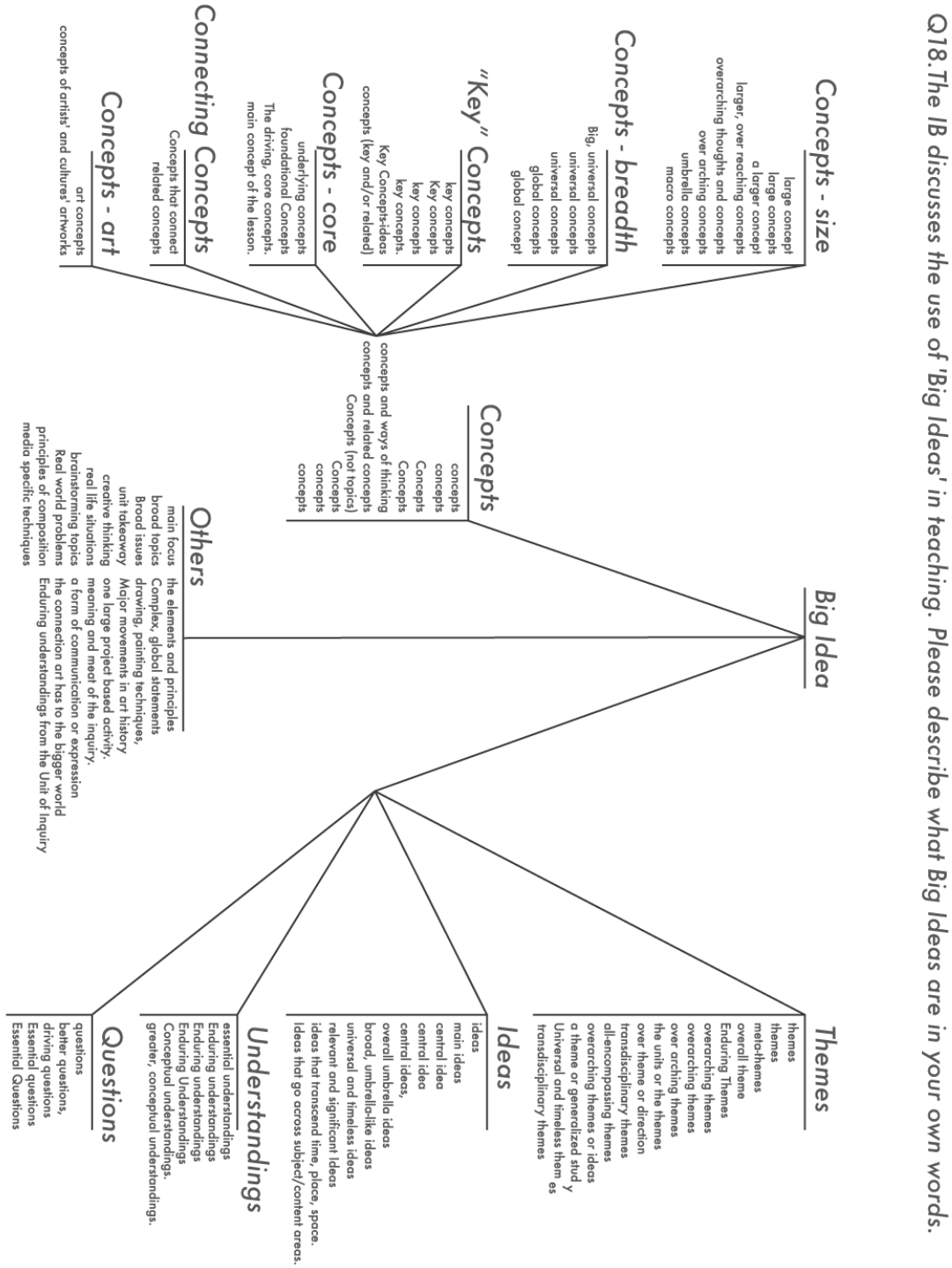
20. The IB PYP Transdisciplinary Themes guide all lessons. Do you feel that some work more naturally with art lessons than others?

21. What does the IB do to help support your work using inquiry-based methods? What could they do better?

22. In the IB, the term "stand-alone unit" describes lessons taught outside the Unit of Inquiry which are most often skills-based lessons in specialist classes. In what instances do you create stand-alone lessons?

Appendix C: Survey Tables, Charts & Graphs

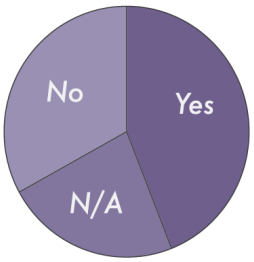
Question 18 Responses



Questions 19 and 20 Responses

Q19. When creating a lesson, are some art mediums better suited to inquiry-based methods than others?

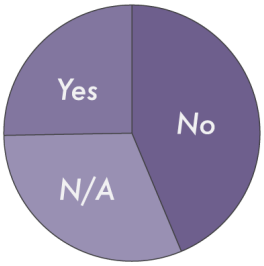
All Art Mediums Work Equally Well	(29)	33%
N/A, Unsure, Unanswered	(20)	23%
Yes.	(38)	44%



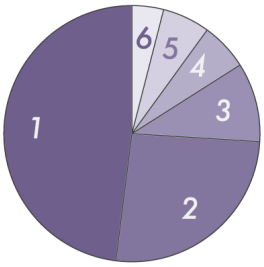
Work Well (22)		Don't Work Well (9)	
Clay	(8)	Messy Things	(2)
Painting	(7)	Stamping	(1)
Mixed Media	(4)	Mixed Media	(1)
Digital Media	(3)	Clay	(1)
Printmaking	(1)	Expensive Media	(1)
Markers	(1)	Cutting	(1)
Drawing	(1)	Origami	(1)
Sculpture	(1)	Digital Media	(1)
2D	(1)		

Q20. The IB PYP Transdisciplinary Themes guide all lessons. Do you feel that some work more naturally with art lessons than others?

No. All Themes Work Well.	(38)	43.6%
N/A or Unanswered	(27)	31%
Yes.	(22)	25.3%



If yes, which unit(s) work best?	
1.How We Express Ourselves	(24)
2.Who We Are	(13)
3.How the World Works	(5)
4.How We Organize Ourselves	(3)
5.Where We Are In Place and Time	(3)
6.Sharing the Planet	(2)



Question 14 Responses

14. What are the biggest hurdles in teaching Visual Art in the IB PYP? (This can be in comparison to other curricular models or things you think don't work well in the IB structure.)

time	32	34.4%
integration	21	22.6%
balancing content & skills	6	6.5%
lack of resources	5	5.4%
split school	4	4.3%
curriulum conflict	3	
inexperience	3	
ambiguity	2	
training	2	
classroom management	1	
language integration	1	
curriculum conflict	1	
teacher assessment	1	
narrow parameters	1	
lack of feedback	1	
lack of guidance	1	
lack of team	1	
confusion	1	
age range	1	
funding	1	
content	1	
budget	1	
admin	1	
special education accom.	1