From Chalkboard to Whiteboard:
A Historical Study of Drawing Instruction:
Walter Smith’s Instructional Methods in Public Schools
In Massachusetts in the 1870’S

By

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Abstract

Emerging from my interest in past methods of drawing instruction, and personal experiences of being taught drawing in the 1960’s by an industrial arts teacher, led me to the study of teaching methods of Walter Smith (1836-1886) in the 1870’s. This historical study of drawing methods used in the public schools in Massachusetts when Smith was hired by the state, to implement drawing into the public schools, revealed instructional methods based on simple elements and principles of design. Smith used six methods of drawing instruction: drawing from printed copies, drawing from the blackboard, drawing from dictation, drawing from memory, drawing from objects and drawing decorative designs. His use of personal slates and small cards with step by step directions for each day of the week all followed a sequential order for students and teachers to follow. Beginning with lines, geometric shapes, and proportions, students would understand, know, and be able to accomplish assignments successfully. Students were taught how to draw and were able to retain what they had learned through clear understanding and continual practice. This study argued that Smith’s methods would benefit public middle school classrooms today. By combining methods of the past with current practices and current technological advantages this study will offer teachers an alternative way to approach drawing instruction for the diverse middle school classrooms in the present time.

Key Words: Principles and Elements of Design, Line, Shape, Form, Slates and Cards, Drawing Instruction, Industrial Drawing Act of 1870, Walter Smith, Louis Prang Publishing
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Finally, I want to dedicate all of this work to my sister Donna who has gone to a better place, and always told me that I could do it, regardless of how difficult it seemed at times. This is for you Donna with love.
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CHAPTER I

INTRODUCTION

Background to the Study

I received my drawing instruction in the early 1960’s by an industrial arts teacher and I was taught how to draw, not how to make drawings. As an art teacher with ten years of experience and a background in Graphic Design, I offer art instruction to 8th graders at Middle School East which is a diverse public school in Milford, Massachusetts, which requires flexibility and challenge. Challenges to address different learners coming from varied levels of art instruction, encourages me as an art educator, to continuously search for successful methods which will enhance my teaching strategies, in order to ensure my students are learning and understanding regardless, of their artistic talents. Experience as an educator tells me that students today often struggle with basic drawing skills.

Students in my classroom come from the lower middle school as well as other districts and countries where their art instruction has not been consistent. However, regardless of how students draw, they are afraid to challenge themselves for fear of failure. Most of my students in the 8th grade fall into this category of self-doubt. Experiences as a teacher of visual art have shown me that reviewing or re-teaching basic drawing skills early in the year, will build their confidence. Specifically, in respect to drawing, and by re-teaching, they can move forward with grade level art instruction before entering the high school.

Discovery of past methods in my course on history of art education, led me to the drawing slates of Walter Smith (1836-1886). According to Smith (1990), “what we are trying to do in our lessons is to make the children know how to draw, not how to make drawings; and I hope you see the distinction” (as cited in Efland, 1990, p.101). This statement by Smith is very
meaningful to me as a teacher of visual art because it connects me to my past and my early education in drawing.

Chalkboards, whiteboards, smart boards, iPads, easels, and tablets, are all common objects used for art instruction in today’s classroom. However the public school classrooms in the 1870’s contained one particular instructional object known as a drawing slate. The drawing slates were used by Smith, an industrial drawing instructor and did not require a computer or electricity to operate. The drawing slates were simply small pieces of slate or chalkboards, for students to draw on when receiving drawing instructions in the classroom during the 1870’s in the United States (Smith, 1872, p. 3).

In 1870 the Massachusetts state legislature was first in the nation, to enact a law requiring public schools to have drawing instruction in the classroom for all students. This was called “An Act Relating to Free Instruction in Drawing” also known as the Massachusetts Drawing Act (Bolin, 2004, p. 101). It was recommended to the state legislature, that Walter Smith from the South Kensington School in Britain, be hired to oversee drawing instruction (Efland, 1990, p. 101).

In 1871, Smith arrived in Massachusetts with the decided objectives to create a plan to educate regular teachers in drawing instruction and to establish a curriculum of art instruction for grades one through twelve and oversee the training of classroom teachers to deliver drawing instruction (Efland, 1990, p.103). Smith’s teaching methods involved the use of small slate boards in which students would reproduce drawings freehand, as the teacher would draw examples on the blackboard in front of them. “Smith developed a graded plan of instruction that began in the primary grades, continued through the grammar school grades and culminated in the high schools” (Efland, 1990, p. 104).
Research Goals

The focus of this proposed study will be a historical research using primary and secondary sources related to Smith and the teaching of drawing in the United States. By examining published articles and books on this subject, and close examination of Walter Smith’s instructional books containing his methods of drawing instructions using drawing slates, I will determine how his methods might be re-framed to use in the 8th grade classroom today. Although the use actual slates are not intended for today’s classroom, this study will primarily be concerned with the information that was drawn onto the slates and how this information could be utilized today, for purposes of drawing instructions in the 8th grade art classroom.

Research Questions

What were common methods of drawing instruction used by Walter Smith in Massachusetts in 1870, and how might they be re-framed to use in an 8th grade art classroom today? Specifically,

What were the purposes of the drawing slates of Walter Smith when used in classrooms to teach drawing instruction to students?

How might Walter Smith’s instructional methods be integrated into the art classroom today for drawing instruction of 8th grade students?

Conceptual Framework

This study was conceptualized by examining primary and secondary sources written on Smith, and the histories of drawing instruction in Massachusetts during the 1870’s by Bolin (1995, 2009); Chalmers (1993, 1999); Efland (1990); Korzenik (1984, 1985); Saunders (1976); Soucy & Stankiewicz (1990); Stankiewicz (1986, 1991, 1997); and Whitford (1923).
Significance of the Study

Study of the methods used by Smith has revealed to me a basic building block from the past for drawing instruction. These methods suggest the basic knowledge necessary to teach a student how to draw. Methods that are still important and relevant in today’s instruction. Smith’s lessons lean towards an industrial or mechanical style, which can be relevant today and connections can be made to current art instruction which prepares students to learn through cross curricular methods. Whereas Smith combined math and science in his art instruction in the 1870’s, similarly art instruction today incorporates these disciplines as well, to engage students and give them a broader educational experience. Students today enjoy connecting art to other areas of study and when doing so they are more engaged in learning which leads to success across the board (Willis, 2012, para., 14). As a visual arts teacher to 8th graders in a public school it is one of my goals to provide instruction to students which prepares them for further art study in a variety of mediums. Students in my classroom arrive with various amounts of drawing instruction, if any, and my assessments of students made at the beginning of the year reveals to me that I must review and re-teach basic drawing instruction in the curriculum. This study will illustrate that the methods Smith used for his art instruction are easily connected to current instruction whereas both methods, past and present incorporate math and science into drawing. Basic drawing knowledge is a foundation students require regardless of the medium or direction they pursue. By learning this, students at the 8th grade level will have the confidence and knowledge to move forward with art instruction.

Limitations of the study

With historical research, the limitations of the study began with the conditions of materials and the limited access to historical information or records. Artifacts which became
primary sources, may not have been preserved well enough for study or sources may not have been accessible. Due to the age of sources, specifically digitally reprinted sources, quality and readability were some of the limitations. Time restraints impacted historical research. When the teacher-researcher began to gather historical facts, it was similar to a map, one piece of research led to another and yet another. There was not enough time to take every path that may have revealed facts desired for the study. As a teacher-researcher, personal preferences impacted or limited the study. Personal choice limited the information to include in the study, or what was studied in depth. Additionally, because the information gathered by the teacher-researcher had to be in a limited time frame, unintentional bias may have occurred as the teacher prepared information to be used in the development of curriculum unit following the study. The teacher-researcher focused on a particular instructional method of Smith’s, which were the drawing slates. Limitations may have occurred by doing such a focused study, thus resulting in missed information that could have been useful.

**Summary**

This historical research, grounded by scholarly journal articles, written histories, and published texts, will investigate drawing instruction methods used by Smith in Massachusetts in the 1870’s. Through investigation of the researched materials, information will be gathered to develop a drawing instruction curriculum, using past methods as a way to connect the past with the present, and engage and excite students. Similarities of the two and the combination might prove to be a successful way for teachers to offer drawing instruction to 8th graders. Chapter two will investigate why the Massachusetts Drawing Act was written and what led to its enactment. Further investigation on Smith’s methods of drawing instruction, it’s relevancy to
the time period of 1870, and the relevancy the methods of instruction have in today’s 8th grade art classroom.
CHAPTER II

LITERATURE REVIEW

Introduction

Efland (1990) has published a copy of the petition sent to the Board of Education of Massachusetts requesting that drawing instruction be introduced in schools and be made available for all men, women and children free of charge. Closer research on this petition shows that reasons for this request came from persons, according to Bolin (1986), in society representing the industrial power structure of Massachusetts and New England. The petition led to the establishment of the Massachusetts Drawing Act of 1870 (Bolin, 1995). As a result, inquiries were made to Charles Perkins (1823-1886) who was a wealthy Bostonian and businessman, for a recommendation of an individual to accomplish the task. Perkins had traveled extensively abroad, and was familiar with the British education systems (Efland, 1990, p. 94). Perkins along with Charles Dudley Philbrick, the superintendent of schools for Boston believed that Smith would be suited for the position. Smith (1872, 1879, 1882), wrote numerous books while in the United States for drawing instruction in the classroom and teacher manuals on how to instruct the pupils.

This chapter describes the Massachusetts Drawing Act of 1870 and its origins leading up to its proposal and its intended purpose (Bolin, 1990, 2004, Chalmers, 2000, Efland, 1990, Stankiewicz, 1997). This is followed by a discussion of the teaching methods for drawing instruction in Massachusetts’s public schools under the supervision of Smith, addressing his background qualifications and responsibilities in Massachusetts (Chalmers, 2000, Daichendt, 2010, Efland, 1990). Additional research was conducted in the area of how Smith used drawing slates and cards, as well as use of tools in drawing instruction (Chalmers, 2000, Green, 1966,

**Conceptual Framework**

The framework for this study was designed to research past histories that led up to the implementation of drawing instruction into public schools, and how to connect past and present methods of instruction, in order for researcher to develop a curriculum for drawing instruction in the 8th grade art classroom today. The conceptual framework diagram (see Figure 2.1) illustrates the areas of research studied through scholarly literature of books and journals, and examination of artifacts that support the curriculum design.
What were the common methods of drawing instruction used by Walter Smith (1836-1886) in Massachusetts in 1870, and how might they be re-framed to use in an 8th grade art classroom today

**Prior Knowledge**

10 years of teaching art. 7 years in middle school, 3 years to grade 8 only

**Areas of Research**

Drawing instruction methods in 1870’s in Massachusetts. Walter Smith’s six methods of Drawing from printed copies, Drawing from blackboard, Drawing from dictation, Drawing from memory, Drawing from objects, Drawing objects using geometric shapes, and Designing decorative shapes in drawing.

**Research Strategies**

Examine historical research by Bolin, Chalmers, Efland, Korzenik, Saunders, Soucy, Stankiewicz, and Whitford in published journal articles and books

**Connections**

Comparison of Walter Smith’s drawing instructional methods to current methods in the public school art classroom

Design a unit with past and current instruction methods for the 8th grade art classroom

Examination of personal artifacts of Walter Smith’s instructional publications and printed publications of Korzenik

*Figure 2.1. Conceptual Framework Diagram.*
Figure 2.2. Photograph of Walter Smith, (Chalmers, 2000).

Walter Smith

Walter Smith (in Figure 2.2) was born in Britain in 1836 in the village of Kemerton, England. At the age of thirteen he went away to boarding school in London to study visual art. He graduated from the South Kensington School and at the age of twenty-four he married Isobel Caroline de la Cour of France. He also became the principal of the Leeds Art School in Britain. Smith was referred to by Bolin as professional drawing master and an important figure in the story of industrial drawing (1990, p. 96). He became the headmaster of the Leeds School of Art and Science in Britain and over the next decade took on many responsibilities involving directorships of other schools. He had the habit of keeping multiple jobs at one time, in lieu of refusing other offers for full time jobs made to him (Korzenik, 1985, pp. 155-157). In 1871,
Smith departed from his multiple positions, and moved himself, his wife and their children to Boston, Massachusetts (p. 157). Upon arriving in Boston, Smith took the position as Director of Drawing for the city. With the recent enactment of the Industrial Drawing Act in Massachusetts, which will be discussed in the next section, Smith’s duties were not solely the directorship of drawing but he was also responsible for supervising and training classroom teachers in drawing instruction (Korzenick, 1985, p. 155). A couple years after Smith’s arrival in Boston, the Massachusetts Normal School opened and Smith held the position of principal for the school (Chalmers, 2000, p. 151). He remained in the United States for 12 years (p. 15)

**Industrial Drawing Act of Massachusetts: 1870**

Events leading up to the drawing act were pointed out in detail by Efland (1990) in what he referred to as, “The Industrial Drawing Movement” (pp. 92-113). Following the Civil War Massachusetts found itself in the middle of an economic recession in the textile industries, due to the cutoff of cotton from the Southern states. During the war the prices for goods were high because of the demand; however the profits realized were limited because of the low supply of raw materials. After the war, the growth of the textile industries dropped, due to lack of investment capital, which was being put into other markets such as the railroads. At the same time more opportunities in the mid-west were becoming available and investments in the railways were more attractive as the rails were expanded west. New England industries were affected by the new opportunities in the west and also had to compete with the European textile industry (p. 93-94).

The Paris Exposition of 1867 displayed goods from the European textile industry sending an enlightening message to the American industry on the quality of their good. The European goods far exceeded the quality of those from America and the industrialists from Boston wanted
to know the secret to Britain’s success. If the textile industries were to survive in New England something had to change, and Efland points out that society looked to the schools to make that change (p. 94). Europe had met the challenge years earlier by implementing industrial drawing instruction in their education systems. Bolin, (1995), (2004), Chalmers, 2000, Efland, (1990), Korzenick, (1985), Stankiewicz, (1997), and Whitford, (1923) have all written about the Massachusetts Drawing Act and give their interpretations as to why and how the State of Massachusetts came to be the first state in the nation to establish into legislation that all students in public school be offered drawing instruction (as cited in Bolin, 2004, p. 101). Bolin argued that the economic and personal ambition played a significant role in the initiation of the legislation, which enacted the law in Massachusetts, as well as surrounding states that followed (2004, p. 101). The purpose behind this act, according to Whitford, (1923) was a way to contribute to industry. By teaching drawing to students it would prepare them to contribute their knowledge and influence the design of industrial products, resulting in favorable comparison to foreign goods (p. 110).

Responding to the situation was the submittal of a petition to have Massachusetts legislature establish the Massachusetts Drawing Act of 1870. Two key people named Francis Cabot Lowell, Jr. and Edward Everett Hale were directly connected to the textile industry along with several other citizens and they drew up a signed petition requesting that free drawing instruction be made available to the entire state (p. 98). As mentioned earlier, Walter Smith was hired to carry out the demands of the Drawing Act, and to see that drawing instruction became part of the education curriculum in Massachusetts.
Smith’s Methods of Instruction

Smith’s methods for drawing instruction that he developed for Massachusetts focused on teaching students to draw with accuracy and precision. He based this on the use of geometrical figures and various types of lines (Chalmers, 2000, p. 84-85). In Green’s article, *The Forgotten Man*, (1966), Smith presented instruction to larger classes using the blackboard and the students would copy the work that he drew (p.5). Smith justified in two ways: “that it was the only rational way to learn, since drawing was essentially copying; and that was the only practical way to teach, since classes were so large and only a very limited amount of time was allotted in the school week to drawing” (Green, 1966, p. 5). Smith developed instruction for grade levels 1 through 12. He wrote the books to coincide with the three levels of schooling. These were: Primary – First 3 years, Grammar – next 6 years, and High School – 1 year (Chalmers, 2000, p. 78). Beginning lessons involved drawing of lines in different directions and lengths. As the student progressed more complicated lessons were taught, building off of each other (Green, 1966, p. 5). Smith’s methods of drawing instruction were outlined in the books that he had published in the United States. The first publisher of the instructional books in 1872 was J.R. Osgood & Company in Boston (Stankiewicz, 1986, p. 60). However further research revealed that in addition to J.R. Osgood & Company, another publisher named Noyes, Holmes, & Company, also of Boston, published a book the same year. *That book was The Teacher’s Companion to the American Drawing Slates and Cards* (Smith, 1872). This text was written to assist the teacher who was trained for art instruction. Figure 2.3 shows the various examples of Smith’s drawing exercises teachers used for reference as they worked on the chalkboard. The students would copy from the chalkboard on their personal slates or they would come up to the large chalkboard and recreate the line exercises (1872).
A few years later Smith worked with another publisher that had more of an impact on American art education by the name of Louis Prang. The business relationship between the two proved to be beneficial to both, in regards to the promotion of Smith’s methods and a showcase for Prang’s publishing company (Stankiewicz, 1986, p. 60). Smith and Prang worked together to produce books and tools to accompany the drawing instruction books. Figure 2.4 shows the Drawing Slates students used to draw on as they practiced. These were miniature chalkboards or slates (Korzenik, 2004, p. 38).
Figure 2.4. Drawing Slates (Korzenik, 2004, p. 38).

Figure 2.5 is a photo from Korzenik’s collection of the drawing cards that were produced as another tool for students to use to practice drawing. Smith wrote a specific manual to go with the cards in 1875 entitled, *Teacher’s Manual for Freehand Drawing in Primary Schools* published by James R. Osgood & Company in Boston.
Figure 2.5. Drawing Cards (Korzenik, 2004, p. 13).

In many of his art instruction books, Smith began each book with pages directed to the teacher. Specific instructions on how to use the book and how to teach children made up the first several pages. In Smith’s book, *The American Textbooks of Art Education: Teachers’ Manual*...
for Primary Course of Instruction in Drawing, the first 23 pages were dedicated to directions for the teacher. Topics included: where to stand in the room, when to draw on the chalkboard and how to stand at the chalkboard, how to speak with the students, depending on their age, and what to expect from the students at different ages (Smith, 1882, pp. 5-23). The books covered everything a teacher might need to know as well as the daily assignments for drawing instruction. Additionally, Smith wrote pages of suggested dialogue for teacher. Interestingly, Smith placed dialogue for different students as well, referring to them by name in the printed dialogues (See Figure 2.6).

Figure 2.6. Example of suggested dialogue for teachers (Smith, 1882, p. 30).

Research into the drawing manuals Smith wrote showed that they were similar in the order of topics. He began with an introduction about teaching, as if it were a message of directions on how to teach. Smith wrote, “This little work is intended to assist the teacher who
has to give instruction in drawing…” (Smith, 1872, intro.). Smith followed the introduction with definitions of terms and materials that would be used during instruction. Following these topics were the actual lessons for teaching drawing in the classroom. The lessons were organized by subjects that Smith covered: lines, angles, triangles, square, oblong, circle, ellipse, oval, curves and designs. The books ended (see Figure 2.7) with a collection of large examples of drawings similar to the smaller drawing cards, or they ended with a collection of daily drawing drills for students to do during class time (Smith, 1872, 1875, 1882).

![Figure 2.7. Order of Work (Smith, 1882, p.102).](image-url)
Summary

Smith’s methods of drawing instruction for Massachusetts in the 1870’s were referred to as *industrial* drawing (Efland, 1990). Smith described it as when ordinary drawing becomes industrial, this is because it is executed in a neat and precise manner, for accuracy of perception (Efland, 1990, p.102). Research revealed that there were different interpretations of what industrial drawing was and what purpose it would serve by being part of public school curriculum in the 1870’s. Historians are in agreement that timing was an important factor as the United States was in the midst of the Industrial Age. According to Efland’s (2009) research, what preceded the decision to offer art instruction in public schools was the influence of citizens who were directly connected to the textile industry, Francis C. Lowell and Edward E. Hale. These two men reportedly instigated a petition requesting that legislation draft and adopt the Drawing Act into Massachusetts law (Efland, 1990, p.97). Obvious reasons behind this were for purposes of having trained workers for the industry. A copy of the reprinted from the Massachusetts Board of Education (1871) annual report, the petition discussed the fact that American manufacturers competed with a disadvantage to European manufacturers. The European workers of all classes received free drawing instruction as part of their training (p. 98). Historical research of Smith and his time spent in Massachusetts developing a drawing curriculum, offered a solid base to look closely at the teaching methods in the public schools, in the 1870’s. Chapter three will look at how historical research was conducted for this study.
CHAPTER III

METHODODOLOGY

Design of the Study

Information for the study was gathered by studying the history of drawing instruction in public schools in the 1870’s using primary and secondary sources on Walter Smith and the Massachusetts Drawing Act of 1870. These offered the background knowledge of Walter Smith, his influence on art instruction in Massachusetts, and his methodologies for this instruction during the 1870’s. Meaningful investigation into the past according to Bolin, (2009) begins with “What if,” “How might,” or “Why did,” questions (p. 110). Using content analysis while examining the teaching methods used by Smith, specifically the drawing slates offered information which could result in the design of an instructional drawing unit, encompassing past and present drawing instruction in the 8th grade art classroom.

Data Collection

Collected data included written research by historians in scholarly journals from online library sources. Additionally, collection of purchased books from online sources, in print form, by historians and educators, purchased reprints of Walter Smith’s textbooks containing examples of slates and drawings, as well as methods of instruction during the time period specified were studied (See Figure 3.1).
<table>
<thead>
<tr>
<th>PRIMARY SOURCES</th>
<th>SECONDARY SOURCES</th>
</tr>
</thead>
</table>

*Table 3.1. Sources.*
Data Analysis

Data was analyzed using content analysis. Coding methods for data included reading literature and retracting information directly related to research questions, and or topics. Categories examined were historical events that related to drawing instruction in the 1870’s in Massachusetts and instructional methods for drawing used by Smith. After analysis of the information gathered, decisions were made as to what facts and information will assist in the design of a unit for purpose of art instruction to 8th graders today, using Smith’s methods from the past in combination with current teaching methods.

Summary

Romans (2004) argued that with regards to developing a better understanding of the history of art and design education one continually needs to question and re-frame past events. By doing this periodically, revisions can be made as more facts might be revealed. This historical study is not something that can be proved or disproved but rather it is a topic that is based on reputable accounts of history from the sources chosen for research. Smith’s methods of art instruction covered the following areas: drawing from printed copies, drawing from the blackboard, drawing from teacher dictation, drawing from memory, drawing from objects, and drawing by design for decorative purposes. These methods will be discussed in detail in the next chapter.
CHAPTER IV

WALTER SMITH’S METHODS OF DRAWING INSTRUCTION

This chapter describes Walter Smith’s methods of drawing instruction and the ways that these methods were delivered by teachers in the classroom. The methods Smith used for drawing instruction in Massachusetts public schools consisted of six specific areas of drawing: drawing from printed copies, drawing from blackboard, drawing from dictation, drawing from memory, drawing from objects, and drawing as designing for decorative purposes (Smith, 1880, p. 29). Smith made it clear as director of the art instruction curriculum, that regular teachers would teach drawing to students and only the specially trained teachers, like himself, would train classroom teachers to teach drawing (Smith, 1879, p. 17). Teachers were expected to draw examples on the blackboard, however it was expected that the students rely and refer to the printed copies of all drawings in their lessons. Art instruction was delivered daily (see Table 4.1) to students and Smith had a weekly schedule for teachers to follow as well as the expectations of student work (Smith, 1879, p. 15).

<table>
<thead>
<tr>
<th>Duration of Lessons by Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1</strong> – 10 to 15 MIN</td>
</tr>
<tr>
<td><strong>Year 2</strong> – 20 MIN</td>
</tr>
<tr>
<td><strong>Year 3</strong> – 20 MIN</td>
</tr>
<tr>
<td><strong>Grammar</strong> – 30 MIN</td>
</tr>
<tr>
<td><strong>High School</strong> – 2 HRS 3x/wk.</td>
</tr>
<tr>
<td><strong>DAY</strong></td>
</tr>
<tr>
<td><strong>MONDAY</strong></td>
</tr>
<tr>
<td>Geometry Drawings</td>
</tr>
<tr>
<td><strong>Tuesday</strong></td>
</tr>
<tr>
<td>Reduction &amp; Enlargements</td>
</tr>
<tr>
<td><strong>Wednesday</strong></td>
</tr>
<tr>
<td>Lessons From Memory</td>
</tr>
<tr>
<td><strong>Thursday</strong></td>
</tr>
<tr>
<td>Lessons From Teacher Dictation</td>
</tr>
<tr>
<td><strong>Friday</strong></td>
</tr>
<tr>
<td>Object Drawing</td>
</tr>
</tbody>
</table>

*Table 4.1*. Diagram of Smith’s weekly schedule of lessons for grade levels.
Regular teachers were trained to give instruction in drawing by a small group of high school specialists that Smith trained. Smith held in service training for the specialists and under his direction the specialists trained the primary and grammar school teachers (Efland, 1990, p. 105-107). In Massachusetts there was nine years of compulsory schooling. There were the primary years, and then six years of “grammar” school consisting of intermediate, middle and junior high grades. After the grammar years students could go on to high school, and normal school (Chalmers, 2000, p. 92-93).

**Purposes of the Drawing Slates in Drawing Instruction**

Drawing instruction by Smith utilized the individual or personal slate as well as the book of slates. The drawing slates and the book of slates were used frequently while completing shorter lessons. The short lessons came from copying the blackboard drawings or drawing from memory and from objects. The purpose of using the slates was to allow for drawings to be done quickly and wiped off easily, so a new drawing could be started. Smith encouraged teachers to have students do additional work using slates so that young students could be kept busy. Quick lessons on the slates would keep the students amused and happy to draw different designs and objects (Smith, 1879, p. 159).

When students were learning to draw forms from nature such as leaves, Smith suggested the teachers request students to gather a few leaves and place them on the slate. By arranging the leaves on one side of the slate and then drawing next to the arrangement, this would give students practice in understanding the relationship between nature and drawing, and drawing to arrangement, or design (1879, p. 166). This would be done frequently in order to vary the work during the weekly schedule. Slates were used for the busy and additional work, because of they could be used over and over again by students. Unlike the drawing paper that would have to be
erased if mistakes were made and it would be left with marks and surface abrasions. The following sections outline various methods of drawing instruction along with the use of slates.

**Drawing from Printed Copies**

Smith’s instruction method of drawing from copies incorporated a limited use of copying from the blackboard and relied mainly on copying from printed card copies. He believed it was the rational way to learn since drawing was copying, and second, it could be a practical way due to the large class sizes and limited time allocated to drawing instruction (Green, 1966, p. 5). Smith’s drawing instruction method using printed copies referred to the use of drawing cards. The cards in Figure 4.1 measured three by five inches and there were two different sets. Each set contained 7 cards in an envelope. The cards supplemented teacher demonstrations and were given to the students (Efland, 1990, p. 104).

![Figure 4.1](image.png)

*Figure 4.1. (ca. 1880). Drawing Cards. Drawing card set cover., Prints and Ephemera, Huntington Digital Library, San Marino, CA.*
The exercises on the drawing cards seen in Figure 4.2 were printed with white lines on a black background simulating a black chalkboard. The students were guided by the teacher to copy from the cards and look at the sketch that the teacher drew on the large blackboard only for the purpose of letting the students know what they would be drawing that day. The cards were used for reference and for the practice of making enlarged drawings.

*Figure 4.2.* (ca. 1880). Drawing Card. Drawing card No. 1 in first series, Prints and Ephemera, Huntington Digital Library, San Marino, CA.

Prior to the drawing exercises, the teacher would give an explanation to the students on the proportion of the parts and the constructional lines to be drawn. Explanations of terms or vocabulary related to the lessons were given by the teacher at the beginning of each lesson. All of the geometric forms, angles, triangles, quadrilaterals, polygons, simple and compound curves and proportions were taught to the students so that they would know them by sight and be able to name them and give the definition of each (Smith, 1882, p. 12). Students were instructed to draw their lines as large as their work area would allow and their lines had to be drawn clearly with no mistakes. Lines reproduced were vertical, horizontal, oblique and parallel. Smith (1872)
stated, “Those only draw well who draw intelligently, and that must come from understanding” (p. 5).

The drawing cards had dotted guidelines which were not to be shown in the final drawings the students made. The lines were erased once the drawing was completed. There were measuring scales included with each series, however students were instructed not to use the scales to draw the lines, but rather use them after lines were drawn for determining the accuracy of length and division of the line (Smith, 1880, p.10).

The first lessons students were instructed to do were to learn about drawing straight, vertical, horizontal, oblique and parallel lines. These lessons began on Mondays. This was done repeatedly and without the use of a straight edge. Smith believed that if students repeated this task over and over that they would improve quickly and the need for a ruler was not necessary unless specific measurements were required. With this free-hand drawing Smith suggested that when drawing vertical and horizontal lines the student’s slate or paper should be placed in one position. The paper or slate should be directly in front of the student and parallel to the edges of the desk. By drawing free-hand the students learned to understand how to execute the straight lines by seeing and doing, without the use of rulers. Students were required to learn how to divide lines into equal sections beginning with dividing the line in half and then into smaller lengths. All of this was expected to be done by visual examination of the line and not by a measuring tool. Successful students would be able to visually “eyeball” lines and be able to see and mark the divisions after continuous drawing and practice, as well as an understanding of the tasks (Smith, 1880, p. 34).
**Practicing enlargements and reproductions**

Enlargements were made every Tuesday and these were taken from the lessons on specific lines or geometric shapes drawn on Mondays in the schools. Students were instructed to use the shapes they practiced and combine them with lines to form an object such as a line drawing of a house. Each shape was drawn larger so that the forms would construct the house as seen in Figure 4.3 (Smith, 1882, p. 95-96).

Practicing reproductions or drawing from memory was a weekly task for all students included in the instructions used by Smith. This occurred every Wednesday during art instruction. Students were required to draw from memory and reproduce what they had been taught the previous day. The teacher would offer limited descriptions to the students for purposes of recall to get them started on the tasks. Smith believed that by drawing from memory and reproducing images on a weekly basis, it would assist the students in retaining knowledge from previous lessons (Smith, 1882, p.121).

![Figure 4.3. Triangles Drawing Card No.3 First Series (Smith, 1882, p. 121).](image-url)
Drawing from Blackboard

Drawing on the blackboard was another instructional method designed by Smith. The blackboard lessons were the second lesson of each week. Smith had specific directions for teachers as they used the blackboard to deliver lessons. He instructed teachers to stand at different angles for drawing different lines on the blackboard (Smith, 1882, p. 13).

Figure 4.4. Blackboard, 1877, by Winslow Homer, illustrates how Smith expected teachers to stand at the blackboard during instruction. (https://www.nga.gov/feature/homer/homer11.htm).

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1 The marks on the blackboard puzzled scholars for many years. They now have been identified as belonging to a method of drawing instruction popular in American schools in the 1870s. In their earliest lessons, young children were taught to draw by forming simple combinations of lines, as seen on the blackboard here. Rather than being a polite accomplishment, drawing was viewed as having a practical application, playing a valuable role in industrial design (https://www.nga.gov/feature/homer/homer11.htm).
For example, when drawing vertical lines, the teacher would stand directly where the line would be, with their right side partially turned towards the board. The teacher would be far enough away so that when their arm was extended it would fall easily to make a straight line without any jerked movements and with a uniform slow motion making it easy for the students’ eyes to follow. Teachers began by drawing the whole image or line variations on the blackboard prior to the lesson (Smith, 1880, p. 15). This was done with the idea to allow the students to see what they would be learning before they started. The teacher would then begin the lesson by drawing each line step by step, with the students drawing along at the same time (Smith, 1880, p. 16).

Drawings were made simply and quickly on the blackboard, but it was recommended this be done with exact proportions, so that students sitting anywhere in the classroom would be able to see them and copy with accuracy as the teacher gave the description (p. 17). Smith mentioned in his instructions for blackboard use, that teachers should not use the blackboard too much and that it should merely be used to explain the principals and to illustrate the right and wrong methods of work (1879, p. 15). He encouraged the use of the blackboard for students. He suggested that every week students should practice drawing at the blackboard every time a lesson was given (Smith, 1872, p. 8).

With all the blackboard lessons, Smith insisted that any use of the blackboard would accompany step by step instruction with the teacher actively giving direction. Smith wrote extensively in all his books about the improper use of the blackboard. He expected the trained teachers to spend their time at the blackboard only to do general explanations of the principals of drawing. This time according to Smith, would be only one-tenth of the whole time of the lesson.
and the remaining nine-tenths would be devoted to individual instruction to the students (Smith, 1879, p. 15).

**Practicing reduction**

Younger students used their personal slates for learning reductions of drawings while following along with the teacher (Smith, 1882, p. 13). Because the personal slates were so small (approximately 8 inches by 10 inches), reductions were necessary for all drawings copied from the blackboard at the front of the classroom. The slates were two sided and had a wooden frame. One side was a blank slate, shown in Figure 4.5, and the other side had a half-inch grid on it used primarily for writing. The older students would have the option to use slates or paper as they progressed with their lessons (Smith, 1879, p.19).

**Use of personal slates**

As the teacher drew the images on the large blackboard the students were then challenged with the task of copying all the images onto a small slate. Smith was specific in how to use the slate while drawing; students were not to bear down heavily onto the slate when drawing and start from the left side always unless they were left-handed, then it would be the opposite. Slate pencils which were made from soapstone were to be kept sharpened at all times, providing students with clean accurate lines when drawing on slates. Slates were to be kept clean at all times (1882, p. 22).
Smith suggested that students should sit facing their desk, with the slate lined up parallel with the edge of the desk when drawing straight lines. When drawing curved lines the slates should be turned so that the curve will be concave to the hand. When drawing a vertical line students were instructed to sit upright and draw towards their body. Shorter lines were to be drawn with moving the fingers only, and as the next line drawn became longer, the hand was to be moved at the wrist, and finally use movement of the forearm for even longer lines. He instructed teachers to be very precise when giving instruction to students so that the student would not fall into the habit of erasing frequently (1882, p. 20-22). The younger students used the drawing slates in their primary years because mistakes could easily be erased and corrected. Students had small drawing books that were used that served the same purpose of the slates. The books had images printed on one side and a blank on the opposite side. Students practiced daily lessons in them and could take them home to continue with their practice work (1879, p. 145).
Drawing from Dictation

Smith believed that dictation was an important method in his drawing instruction as its educational value was valuable to both teacher and pupils. Dictation was used weekly on Thursdays as a form of review from the previous lesson. Verbal dictation in art instruction involved teachers giving only verbal descriptions of the form that was to be drawn by the students. Students listened carefully to the words the teachers spoke and made a mental picture of what the teacher required. Once the teacher finished speaking, students drew an image of what they perceived the description of the form would be. Dictation was considered beneficial as a means of review for students. Smith mentioned that the consistency of language the teacher used was important because it resulted a thorough understanding for the students (1879, p.73).

Dictation with proper vocabulary

Smith emphasized the use of correct vocabulary in his directions for dictation in the teacher manuals (1880, p. 21). He explained that by using the correct words all the time, regardless of how difficult or technical the words were, students would become more familiar with them as they progressed through their lessons. It was expected that the students used the correct words and terms at all times, and the teachers were to insist upon this during lessons. Teachers would make sure that their wording was always the same when repeating back to students. Being consistent with the vocabulary assisted in learning the correct words and understanding how the forms were drawn as the teacher was dictating (Smith, 1880, p.30).

Accurate Vocabulary

The chosen vocabulary that was used in dictation was always that of accuracy and not words that would be used for other reasons. For example, the word “horizontal” would never be replaced with the word “level”, because it could refer to something different. Similarly, the word
“upright” would not be used for the word “vertical” (Smith, 1880, p. 19-20). Technical terms were encouraged by Smith in his instructional methods to teachers. As the students progressed with their drawing from dictation, Smith instructed that the teachers begin using less detail when dictating. Students were to rely more on forms and less on direct words as they became more experienced and familiar with drawing exercises and with the vocabulary (p. 21).

**Examples of dictation lessons**

Smith suggested different methods to deliver dictation. First, the teacher would dictate the first line for students to draw, wait as students drew the line, and then draw the same line on the blackboard. This way the students could check their work against the teacher example, to make sure they had drawn correctly from the dictation. Each line of the form would be done this way as a step by step process and students would keep up and make corrections as they went along. In the second way, the teacher would slowly dictate the whole form first, as the students drew along while listening. Then the teacher would draw on the blackboard the entire form for students to compare theirs to the blackboard sample. The second method is more difficult according to Smith, but instilled a high level of focus for the students. This method proved effective in terms of time management to offer assistance to students who needed it the most (Smith 1880, p. 21).

**Drawing from Memory**

The drawing from memory method in Smith’s instruction for Wednesday came after lessons on line construction and enlargement, and before the instruction method of dictation. Students would have to recall from previous lessons, about the characteristics of lines that they learned, and visualize the proportions of the lines in relation to the whole form they were required to draw. When using memory drawing students were to decide which forms they
remembered and how many of them they were going to draw. Once this was established the student would divide the slate or paper accordingly. While drawing the forms the student should not refer back, to what he or she had drawn already, but rather continue to draw from memory (1882, p. 158). Smith (1880) explained this method:

> All this knowledge is needed before the pupil attempts to draw a figure from memory; and thus such an exercise affords a twofold education; in training the mind to examine and retain the knowledge gained by the eye and the perceptive faculties, and in training the hand to record the knowledge thus classified and held by the memory (p. 22).

Memory lessons were to be simple at first so the student would not become discouraged and they were done frequently. Forms chosen for memory drawing were pleasing and suggestive and would test the students’ knowledge and not manual skills. By doing the memory lessons frequently Smith intended for students’ mental powers to become stronger as well as their muscle strength would improve from frequent action (Smith, 1880, p. 22).

**Basic forms learned for drawing**

It was essential that when doing the memory drawings on Wednesday of each week the student would concentrate on recalling the reduction lessons from Tuesday that built off of Monday’s lesson. Initially younger students were taught simple geometric lines on each Monday. As they moved up to higher grade levels, Monday’s lessons called for more complex lines for construction of different forms. The forms would be simple at first but then became more decorative and more ornate as the student progressed with their art instruction (Smith, 1882). Combinations of lines, angles, circles, triangles, curves, ellipses, and ovals were some of the geometric lessons on Mondays that students, after time, were able to recall from memory, in order to complete a variety of forms in design as seen in Figure 4.6.
Figure 4.6. Scheme of subjects schedule, second year, first half (Smith, 1882, p. 102).

**Practicing drawing using recall of forms**

When drawing from memory students were given a task each week building off the knowledge gained from previous lessons. Referring to Figure 4.6, the first week lesson on the left of the schedule, students would use what they learned on Monday and Tuesday to create a horizontal border. On Monday the students drew horizontal, vertical, parallel, and oblique lines. On Tuesday the students created an enlarged square with horizontal and vertical lines and bisected it with oblique lines. On Wednesday students would, from their memories of lessons on Monday and Tuesday, redraw what they had learned as a form of practice and retention. The drawings made would then be dictated by the teacher on Thursday and on Friday the knowledge from the week was put onto paper to form the object which varied weekly ranging from envelopes to other things. Written directions for a decorative border design in Smith’s teacher manual are shown in Figure 4.7. Students would repeat the design to create the borders.
Directions. – Draw a vertical line an inch long. - From the upper end of the vertical line, draw a horizontal line rather more than three inches long. – From the lower end of the vertical, draw a similar horizontal. – From this point, draw a vertical to meet the lower horizontal, thus making a square. – Make two other squares in the same way. – Erase what remains of the horizontal lines. – In each of the three squares, draw the figure of Tuesday from memory.

Figure 4.7. Directions for horizontal border design, (1882, p. 111).

Students were required to do drawing from memory lessons such as this, on a weekly basis and if they were doing additional practice work, it had to be done from memory. With these methods and repetitive work, Smith believed the students would successfully retain their knowledge (1880, p. 22).

**Drawing from Objects**

Object drawing was considered to be representative of the length, breadth and thickness of an object or model, sometimes referred to as “Freehand Perspective” (Smith, 1879, p. 245). The aim was not to be pictorial or duplicate the genuine perspective qualities of an object. Smith’s instructional method for object drawing was given to teach the students to observe geometric characteristics represented within the whole object (Smith, 1880, p.63). Drawing from objects was scheduled on Fridays according to the schedule of lessons Smith used for drawing instruction. The main purpose of this was to cultivate observation by the students. Since it was the end of the week in the lesson’s schedule, Smith wanted the students to observe all the vertical and horizontal lines within an object, instead of just copying what they saw the teacher drawing on the blackboard (1882, p. 48).

**Observation of geometric shapes within objects**

Instruction for this method began with having students observe all of the vertical lines in a selected object such as in the classroom, the sides of the window casings or door frames. The teacher would ask students to point out examples of the vertical lines of the object and tell about
them. The steps of instruction would remain the same; building off of the weekly format. Drawing from objects would be determined by what was learned earlier in the week and then followed with an object that had the lines or shapes learned on Monday as seen in Figure 4.8. For example, if the students were learning ovals, they would build off of that, and on Tuesdays they would copy enlargements of goblets that had the base of an oval within it, and then on Thursday the handle of a mug. Friday the student would draw a pear from observation viewing the object itself.

![Figure 4.8. Oval – Drawing Card No. 6, Second Series (Smith, 1882, p. 194).](image)

**Lines and shapes to represent observed object forms**

Smith began with basic lines and shapes learned earlier each week and culminated each week with a chosen object or form. Beginning with objects such as envelopes for lines, folding ruler for angles, circles for clock faces, stars for isosceles triangles, and reverse curves for vases. These were just several of the many objects that he had students draw using this method. As students gained knowledge of the basic lines and shapes they would progress on to more intricate detailed shapes that were drawn using the same principles. Smith cautioned that early stages of drawing from objects, students would draw from memory and not actually draw what they saw. When instructed to draw a plate the student would know that the plate was circular and therefore
draw it as a circle. Drawing the plate from observation the student would draw the plate elliptically, as they viewed it, sitting in front of them on the table (Smith, 1879, p. 248).

The objects used for drawing for older students involved multiple lines and curves with different angles and views. Because this method of drawing from objects was done free-hand, Smith’s intent was to have students develop imagination through drawing what they observed in “space”. By making a clear mental image of a solid, with its lines all in the correct positions, students would be trained to see the beauty in forms regardless of whether they were graceful or homely. Following the work done on Fridays, students had in their schedule what Smith referred to as, “additional work” which applied knowledge of the entire week (Smith, 1882).

Drawing as Designing for Decorative Purposes

The final method of designing decorative shapes in drawing was to instruct students to draw designs using geometric forms already learned, and apply them to be used for decorative purposes such as the wallpaper designs as seen in Figure 4.9. Prior to lessons of design Smith suggested that teachers were to obtain sample booklets from dealers and manufacturers of wallpaper designs and woven fabric designs in which repetition of shape was clearly used (1882, p. 212).

Figure 4.9. Sample of Rosette patterns wallpaper (retrieved from http://www.bradbury.com).
Line applications

The sequence of this lesson is shown in Figure 4.10. Students used the geometric forms and repeated them in a square format to create an enlarged view of the design. The bisected diamond shape, together with the rosette shape, done repeatedly within the square, became a decorative image. Students took the image, and through repetition, created a decorative design that would have been utilized in the textile industry or in furniture design.

![Figure 4.10. Units of Design – Drawing Card No. 10, Second Series (Smith, 1882, p. 212).]

For the lesson in Figure 4.11, the teacher had the students draw a square and have them bisect the square horizontally and vertically. Next the bisected areas were to be divided again using diagonals. Within each section curves would be sketched in to form the rosette and students were reminded that the sections must be repeated identically to make up the unit.

![Figure 4.11. Units of Design – Applications Card No. 10, Second Series (Smith, 1882, p. 214).]
The units of design, which referred to a single finished shape with line designs within a square, circle or triangle, were intended for using repeatedly or alone. When repeated horizontally, these units formed a horizontal decorative border and when done vertically they would form a vertical decorative border. A unit of design like the one seen Figure 4.12, may also be repeated around a center form, but had to be large enough to carry all the single units so the center design did not look as though it was not supported by other line work (1882, p. 212).

![Figure 4.12. Detail from Page of Rosettes (Smith, 1879, p. 126).](image)

**Symmetry**

In the early years of instruction Smith introduced symmetry in the form of freehand drawing of objects such as pitchers and vases and various leaves from nature. Working from enlarged examples on the blackboard students began by drawing a straight vertical line which would run down the middle of the object. Students would be instructed to place guide points indicating the breadth and length of the ellipses or ovals which formed the overall shape of the object. Teachers would point out to the students the fact that, the objects they were drawing were symmetrical and that is why they would begin with a central vertical line. The students made several rough drawings of this type in early lessons. As the students progressed they would revisit symmetry in their drawing books which had half drawings already printed on the work pages and they would be instructed to complete the second half of the object or design.
These were referred to as half page illustrations. Many of the symmetrical drawings prepared the students to draw designs for decorative purposes. The decorative designs incorporated two principles in design, symmetry and repetition, as seen below in Figure 4.13 (Smith, 1879, p. 165).

![Figure 4.13. Ivy Leaf Rosette and detail of Ivy Leaf (Smith, 1879, p. 165).](image)

Using the single ivy leaf, a symmetrical shape from nature along with other organic forms, Smith would have students draw in order to practice the design principles. When the single unit was placed into a square repeated four times it became a decorative unit. When the square was repeated in a horizontal or vertical row it could be applied to textile or ornamental designs, which were found in border designs (Smith, 1879, p. 228).

**Summary**

Smith’s common methods of drawing instruction outlined in his books were sequential and built off of each other as the student progressed. Beginning with subjects of simple line constructions, geometric forms, to object drawing for decorative and ornamental purpose, the methods of drawing instructions were outlined using blackboards, dictation, copying and memory. Each of Smith’s methods for drawing instruction that he brought to public schools in Massachusetts in the 1870’s arguably can be adapted for current classroom instruction today.
The next chapter will discuss how these methods can be incorporated into present day art instruction in an 8th grade classroom.
CHAPTER V

FROM CHALKBOARD TO WHITEBOARD

Introduction

This study of drawing instruction methods that Walter Smith used in Massachusetts in public schools in the 1870’s, showed a strong relationship to the principals and elements of design, that are used today in the art classrooms. For this reason, it was determined that Smith’s methods could be used to teach basic drawing instruction to students in the 8th grade classroom in order to give the students a foundation to build upon as they entered high school level art courses. While researching and studying these methods of drawing instruction techniques such as copying, dictation, memory drawing, object drawing, and decorative shapes in design drawing, it became clear that the step by step process allowed for the student to understand and know how to draw. The methods were arranged in a systematic manner where once the student learned and understood the lesson, they moved forward learning more difficult lessons while relying on prior knowledge to accomplish each task and new challenge.

This concluding chapter discusses these methods of instruction, and how they were beneficial to art instruction in the 8th grade classroom based on personal experience as a middle school art instructor in a public school in Massachusetts. Furthermore, this chapter offers an example through a unit plan design (see Appendix A) that blends Smith’s methods with today’s instruction. This unit plan is a method of instruction that will offer art teachers the ability to instruct students regardless of the student’s prior knowledge or exposure to drawing. Adapted for today’s classroom, Smith’s instructional methods will blend well with the use of current technological equipment in the art classroom. Whereas Smith used personal slates and cards to
assist with instruction, alternative aids using current technology, such as whiteboards, digital
projectors, document cameras, and iPads will be used that are available in a classrooms today.

**Re-Framing Walter Smith**

Consistent with the question of how drawing instruction methods used Massachusetts in
the 1870’s, might be re-framed for a classroom today, the reviewed literature revealed
similarities to current frameworks in art education in public schools. The literature reviewed
offered substantial information on the methods of instruction Walter Smith (1838-1886) used in
public schools in Massachusetts. The literature gathered determined that Smith’s methods could
indeed be re-framed for today’s 8th grade art classroom. The literature also revealed that the
methods of the 1870’s would be beneficial additions to art instruction today. Smith’s methods
were based around the understanding of line, form, and design. These concepts are contained in
the state curriculum frameworks for visual art instruction, known as the principles and elements
of design (Massachusetts Arts Curriculum Frameworks, 1999, p 63).

The reviewed literature of the teacher’s manuals for drawing instruction written by Smith
offered step by step teaching methods that required students to participate actively in the steps by
following, doing, and learning as they go. Once each step had been mastered the student moved
forward utilizing prior knowledge to learn more difficult lessons. The drawing cards that Smith
used daily for student instruction were set up sequentially beginning with lines, followed by
shapes and forms, and using these elements and principles to design decorative images and to
draw objects. Smith did not believe that tools of measurement, (rulers) should be used by
students to perform lessons. In fact the majority of Smith’s lessons were freehand drawing.
Smith makes a point of stating in his guidelines for the use of drawing cards that the scale which
comes with the cards should only be used after the lines are drawn and divided, to determine
accuracy of the length but not to actually draw lines (1880, p 10). Experience teaching in today’s classroom with 8th graders, warrants that this rule would not benefit lessons when re-framing the methods. The fact that today’s classroom is made up of students who receive many different types of art instruction, using a ruler for line work would be more successful to gain positive student outcomes. Personal teaching experience proved that student’s in the 8th grade classroom today, have not had enough experience in methods of drawing instruction to draw freehand and be successful to move on to further levels unless the use of aids such as a ruler was permitted. When mastering principles and elements the use of tools have proved to be beneficial in the 8th grade classroom.

The study also revealed that Smith was hired during the Industrial Age in America and business and government both believed that it would be an economical advantage to have workers prepared better for industry to be competitive in the textile and other industries during this period. It was determined that the schools should take on this responsibility. The state of Massachusetts received pressure from the business moguls to establish the Industrial Drawing Act, passing into law that art instruction should be offered in all public schools. Smith, having the qualifications and experience, was recommended for the position. He was trained at South Kensington School and held the position of Principal at the Leeds Art School in Britain, when he left for Massachusetts to oversee the establishment of a drawing instruction curriculum for the public schools. He was known in history as the professional drawing master (Efland, 1990, p. 96).

The study also revealed instructional methods that involve the use of geometry to form shapes. Teaching in today’s 8th grade classroom using a method such as this would enhance student knowledge by offering relevant material where cross-curricular connections would be
made to the subject of mathematics. Smith introduces line varieties to be drawn and then divided into equal parts beginning with two, three, four, five and six equal parts. Students accomplished this by sight only and then making the marks on the slates where the lines have been drawn. Vertical, horizontal, oblique, and parallel lines are drawn for the lesson (1872, p.7). A lesson such as this would prove to be beneficial today for the 8th grade student when learning division by observation. Smith’s methods taught students different angles and shapes. The knowledge of knowing how to draw these elements and understand their relevance to drawing ensures that the student would master necessary foundations in drawing.

Vocabulary was an important part of Smith’s methods. Teaching manuals reviewed in the study explained the importance of proper consistent vocabulary to ensure a solid understanding of terms such as angles, lines, forms, and shapes (1880, p. 19-20). Using vocabulary in drawing instruction, which is identical in mathematics instruction, has proved to be beneficial to the student as the relevancy and connection was made to the other subject. Experience as teacher-artist has shown that when consistent language is used and used across the curriculums, the student retains information with success and is able to recall this information when needed.

**Personal Impact of the Study**

As an artist-teacher who was educated in drawing instruction in the 1960’s, it was a continuous goal to teach drawing to students in the 8th grade, using methods that were successful to all types of students regardless of what prior, if any, drawing instruction they experienced. Personally having learned to draw successfully in the 1960’s from an industrial arts teacher, it was frustrating as a teacher to have students in the 8th grade who were not, in my professional opinion, educated to perform simple drawing tasks in the art classroom. The past few years
teaching only to 8th graders, in public school in Massachusetts, had revealed to me that the students are not prepared when it comes to basic drawing skills. As a result they do not enjoy drawing because they do not want to fail. Classroom populations are very diverse in abilities, cultural origins, and art education experience. The study of Smith’s instructional methods has offered me a systematic way to teach all students how to draw, as opposed to ways to draw and what to draw.

**Impact on Professional Practice**

Smith’s methods of step by step instruction and use of the principles and elements where students can build a drawing allow for even the inexperienced student to be successful. Through a developed unit plan used in the 8th grade classroom that makes connections to current 8th grade math, students will be able to gain knowledge, understand, and execute drawing successfully. By incorporating Smith’s methods into current methods the lessons will be delivered using current technology available in the classroom. The unit will use the beginning exercises on Smith’s cards and project them onto the whiteboard through a digital projector, with a document camera aimed directly at Smith’s reprinted textbooks. Students will copy, enlarge, reduce and design just as Smith’s methods did. Additionally the teacher will use and interactive whiteboard app on an iPad to mark over Smith’s cards for a deeper understanding for students which will allow for retention of material presented.

**Rationale for the unit plan.**

The unit plan allows for students to utilize the whiteboard or blackboard in the classroom just as Smith required students to draw on the blackboard in the front of the room. Experience as an artist-teacher has proven to me that the more interaction an 8th grade student has to physically use the whiteboard or chalkboard, the more engaged they are and learning is successful. The unit
is designed to be flexible in its delivery methods, so that it can accommodate most classrooms today. The focus is on the instructional methods and student engagement, which will result in full understanding and knowledge. (See Appendix A)

**Implications for Further Research**

After completing the research study of Smith’s drawing instruction methods, the researcher would recommend changes to be done that would enhance the study. Additional time allowed for in-depth study and organization of Smith’s books. The books written by Smith were difficult to navigate through and tended to be repetitive in some areas. The teaching manuals were not presented clearly as far as what grade level was being instructed. The fact that the books were written in the 1870’s to 1880’s Smith referred to only levels in education, such as primary, intermediate, and secondary, not specific such as grades 1 through 12. Future study of the books should begin with one of the later books titled, *The American Textbooks for Art Education*. This book would allow the researcher to understand how the methods of drawing instruction were implemented systematically. The other books Smith wrote would be used for a deeper explanation of the daily methods, supplemental information, but still important.

The research conducted suggests further inquiry about the other drawing instructors who came after Smith and an understanding of their instructional methods. Questions posed would be to see if others after Smith used his methods or their own. Perhaps others modified Smith’s when implementing into their own instruction. Additionally, were methods similar to Smith’s even considered or did they disappear completely from the public school curriculum because of changes in industry and/or social influences?
Suggestions for other educators about this study would be for them to look at Smith’s one book, *The American Textbooks for Art Education*, and focus on what Smith had students do and the orders in which he used. Each step builds off another and this method would benefit teachers and students together. The visual study of Smith’s cards is something that educators would benefit looking at for a genuine understanding of the methods of instruction, and then interpreting them into their own methods customized for their classroom populations and physical settings.

**Advice to the Field of Art Education**

Although the State of Massachusetts has a published curriculum framework for art teachers to follow, it can be loosely translated by the individual art teacher. The principles and elements are intended to be covered at early levels and it is assumed that they are understood as the student progresses. The basic skills are assumed to be existent in every student, but experience as an art educator reveals this is not the case. The focus made on the principles and elements of design should be reinforced year after year and done so beginning with simple line each time. It is recommended that review and reteach should happen at each grade level and in high school in elective drawing one classes. Smith’s methods of the past should not be kept in the past but brought forward and given the attention now that they received in the past.

**Advice to Art Teachers**

The artist-teacher has the ability to make differences with student learning and engagement in the art classroom, which can carry into other classrooms of different subject matter. At the middle level students enjoy art class as a way to decompress from a more rigorous learning environment that is dictated, with less room for flexibility, due to state mandated curriculum and milestones. The art classroom should be a room where all students are successful
regardless of their personal talent as an artist. By implementing simple drawing instruction based on Smith’s methods of instruction, each student will be able to know and understand how to draw regardless of the visual product outcome. Understanding is the key here and once a student understands they are able to perform with confidence. Smith stated, “Precedence is always given to knowledge, and not to manual execution (1879, p. 13). As artist-teacher it has always been a personal philosophy to offer an exciting, engaging, and knowledgeable journey to all students in the art classroom, regardless of where they start and where they end.

**Conclusion**

The existing research surrounding Smith and his influence on drawing education in Massachusetts is plentiful through findings of journal articles, books, and reprinted state records, as well as reprinted instructional books written by Smith. While conducting the research, specifically Smith’s use of slates for drawing instruction, the realization unfolded that his method might be relevant in today’s 8th grade classroom. Teacher experiences in the classroom today have shown that students are struggling with drawing. As a teacher who was personally trained how to draw in the 1960’s, this study is grounded by the fact that past methods prove to be successful and research reveals that past practices of Smith’s were successful as well.

Further investigation into Smith’s methods led to the belief that because his methods of instruction were centered on the use of mathematics and science, it may be looked at today when cross-curriculum lessons are highly valued within art instruction. Bolin, (2009) argued that the employment of thoughtfully-based questions, inquisitive imaginations, and supported speculations may lead the historian into investigative terrain that provides new and unique perspectives on the past and, perhaps also, on the present (Bolin, 2009, p. 111).
Building on Smith’s past methods of instruction a new curriculum will be developed for teaching 8th graders today. The purpose of this curriculum will be to engage students through the combination of past practices and current methods of instruction, which will allow for successful drawing practices. Success with their drawing will offer them the confidence to move forward. Educators continuously strive to improve successes of students in the classroom and to accomplish this it is necessary to research and make inquiry to the past and what the past has to offer in developing educational strategies today. Bolin (2009) believed that if teacher-researchers pursue the past histories in art education enthusiastically, this may result in a better understanding of them, know their value, and open up a range of possibilities. The ideas stemming from past knowledge will shape the teacher’s thinking and be able to offer art education that is relevant and successful to learners today (Bolin, 2009, p. 120).
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Bolin, P. E. (1995). Overlooked and obscured through history: The legislative bill proposed to


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Appendix A

<table>
<thead>
<tr>
<th>Component</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>Unit Rational:</td>
<td>The unit plan allows for students to learn how to draw and utilize the whiteboard or blackboard in the classroom just as Smith required students to draw on the blackboard in the front of the room. Experience as an artist/teacher has proven to me that the more interaction an 8th grade student has to physically use the whiteboard or chalkboard, the more engaged they are and learning is successful. The unit is designed to be flexible in its delivery methods, so that it can accommodate most classrooms today. The focus is on the instructional methods and student engagement, and connections to geometry which will result in full understanding and knowledge of how to draw. The methods Walter Smith (1836-1886) used for drawing instruction in Massachusetts public schools consisted of six specific areas of drawing: drawing from printed copies, drawing from blackboard, drawing from dictation, drawing from memory, drawing from objects, and drawing as designing for decorative purposes (Smith, 1880, p. 29). These methods have been re-framed to use in an 8th grade classroom at Middle School East, in Milford, MA.</td>
</tr>
<tr>
<td>Descriptive Title for the Unit:</td>
<td>Drawing While Drawing From the Past</td>
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<tr>
<td>Goals:</td>
<td>Students should...(Based on Massachusetts Arts Curriculum Frameworks)</td>
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<tr>
<td></td>
<td><strong>The student will understand:</strong></td>
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<tr>
<td></td>
<td>- Line variations, shapes and forms, geometric patterns, symmetry, repetition, proportion, reduction, enlargement, and composition.</td>
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<tr>
<td></td>
<td>- Vocabulary and relationship to elements of design</td>
</tr>
<tr>
<td></td>
<td>- (MACF 2.2, 2.4, 2.5, 2.8, 2.10, 2.11, 2.13, 2.16, 2.17)</td>
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<tr>
<td></td>
<td><strong>The student will know:</strong></td>
</tr>
<tr>
<td></td>
<td>- Vocabulary and meaning in relationship to elements.</td>
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<td></td>
<td>- Identify visually, all elements of drawing methods.</td>
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<td></td>
<td>- Proper use of materials used in drawing.</td>
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<tr>
<td></td>
<td>- (MACF 1.3, 1.7, 2.1, 2.5, 2.8, 2.10, 2.13)</td>
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<td></td>
<td><strong>The student will be able to:</strong></td>
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<td></td>
<td>- Create work using all elements of design both individually and in repetitive forms to create objects, geometric patterns, designs for ornamental and decorative purposes through copying, enlarging, reducing, and repetition.</td>
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<td></td>
<td>- Use appropriate vocabulary when drawing from dictation or other methods for lessons.</td>
</tr>
<tr>
<td></td>
<td>- (MACF 2.6, 2.10, 2.11, 2.15, 2.16, 2.18)</td>
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</tbody>
</table>
Instructional Concepts:

Students at the middle level are in a transitional stage both mental and physical. Bracey states, “that phase should be referred to as the muddle school years, with many children in a state of “mental pause” (Bracey, 1993, p. 731).

Simpson speaks of these years being filled with “complicated social changes that will affect a student’s behavior in the art room as well as their participation in art activities” (Kerlavage, 1998, p. 57). Instructing students in the middle level with engaging dialogue and multiple learning strategies requiring many hands on tasks will allow for an investment in the lesson as well as authentic learning experiences.

Students will have the opportunity to learn about an art classroom from the 1870’s as they learn how to draw. Storytelling (in this case the past history of drawing instruction in Massachusetts Public Schools) at this level has shown to be very engaging to students, based on previous experience as an artist/teacher.

Instructional concepts used in this unit will incorporate the methods of Walter Smith (1836-1886) and re-frame them for the classroom today, using multiple teacher deliveries of instruction. Whiteboards, blackboards, digital projectors and document cameras will aid in delivery of lessons. Students will have the opportunity to be actively involved with activities of drawing on the whiteboard as well as the blackboard, thus encouraging continuous engagement by all students in the class. Experience as artist/teacher in 8th grade reveals that students become more engaged when they have opportunity to go up in front of the class and draw on the board. This method of instruction is one that Smith used daily for enlargement and symmetry (Smith, 1882, p. 12-13).

Another instructional concept used will be that of art journals. If the students in the class have art journals they will use them similarly to Smith’s drawing books which had blank pages for students to draw the lessons. This method was known as drawing from objects (Smith, 1879, p. 286).

This unit will incorporate all six of Smith’s methods for drawing instruction re-framed as to ensure a successful way to teach students how to draw in an 8th grade classroom.
Lessons:

- **Lesson One:** Students will be introduced to the history of Walter Smith when he arrived in Massachusetts to develop an art instruction curriculum. This will be a brief history about the Drawing Act of 1870 and an overview of Smith’s instruction methods.
  - Following the brief history students will be given three different sheets of (teacher made) copies of cards taken from Smith’s Drawing Cards on lines, angles, and geometric shapes. Students will use the method of *Drawing from Copies* and draw in their personal art journals, copying from the teacher generated card copies.
  - Students will be able to use rulers if they choose to unlike the students of Smith’s in the 1870’s. This will allow for students to be more comfortable with their drawing outcomes.

- **Lesson Two:** Students will be using the second method of instruction from Smith and will be *Drawing from the Blackboard*. The teacher will stand at the whiteboard in the classroom and use simple and compound curves to create a water bottle and a vase. Students will watch as teacher draws and then they will draw on pages using reduction to reproduce the drawings in their journal which have been covered with chalkboard contact paper simulating the personal slates used by students in the 1870’s. White chalk pencils will be distributed to students prior to the lesson.
  - *This lesson can also be done on personal iPads if available in the classroom using one of the many free downloadable drawing applications.*

- **Lesson Three:** Students will be using the third method of instruction which is *Drawing from Dictation*. The teacher will dictate line by line to students what will be drawing. By using only verbal instruction and appropriate vocabulary and terms students will draw at the whiteboard or classroom blackboard as the teacher speaks. The teacher will speak slowly giving students enough time to complete the drawing. This lesson will be done using enlargement since the students will have a larger work area to fill.
• **Lesson Four:** This lesson students will be *Drawing from Memory*. Working in their art journals on the pages simulating a blackboard and using the white chalk pencils. Students will draw what they learned in the previous lessons using line, geometric shapes and curves to form objects of personal choice. Rulers will be used if the student prefers, but the teacher will remind them that since they are using the chalkboard paper they can easily erase if mistakes are made. The teacher will encourage the student to attempt without the use of rulers and remind them that in the 1870’s the students were not given that option at this level.

• **Lesson Five:** Objects will be introduced to students by the teacher for this lesson and they will be using the method of *Drawing from Objects*. Teacher will pass out to each student table area 3-dimensional objects of a sphere, cone, cylinder, cube, and triangle. Solid objects can be of Styrofoam wood, or made from cardboard and painted a light matte color so that shadows do not appear so easily. (Empty packaging painted is a good source for the shapes.) Students will be drawing in their art journals on blank pages that are not covered with blackboard paper.

• **Lesson Six:** The final lesson using Smith’s method of instruction will be *Designing for Decorative Shapes in Drawing*. This is a culmination of all of the Unit’s work. Students will be given white drawing paper to develop a design of their own using all the previous elements learned earlier in the unit.

  - Students will be given a piece of paper cut to fit on the inside front cover of their art journals.
  - They will create their design using repetition and symmetry. The teacher will show students examples of borders from wallpaper samples books and examples of tapestry images retrieved from the internet. Once students have completed their designs they will trace over all lines in black sharpie markers and then add color to the design using colored pencils.
  - Once the designs are complete the paper will be glued to the inside cover as a decorative piece for their journal.
<table>
<thead>
<tr>
<th>Resources and Materials:</th>
<th>Materials:</th>
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<tbody>
<tr>
<td></td>
<td>- Student made art journals</td>
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<tr>
<td></td>
<td>- White chalk</td>
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<tr>
<td></td>
<td>- White chalk pencils</td>
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<td></td>
<td>- Pencils</td>
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<td></td>
<td>- Erasers</td>
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<td></td>
<td>- Rulers</td>
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<tr>
<td></td>
<td>- Chalkboard contact paper</td>
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<td></td>
<td>- Black fine point sharpies</td>
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<tr>
<td></td>
<td>- Colored Pencils</td>
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<tr>
<td></td>
<td>- 9” x 12” White sulphite drawing paper</td>
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<td></td>
<td>- Scissors</td>
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<tr>
<td></td>
<td>- Whiteboard</td>
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<tr>
<td></td>
<td>- Digital projector with document camera</td>
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<tr>
<td></td>
<td>- iPads for students (optional)</td>
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<td></td>
<td>- Large wall blackboard (optional)</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Teacher Exemplars:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art work generated from textbooks (Walter Smith, 1872, pp.7-11).</td>
</tr>
</tbody>
</table>
Student made Art Journal
Teacher generated art

Exemplar:

*Set of six small, geometric wood models*, Retrieved from The Huntington Digital Library, San Marino, CA.

<table>
<thead>
<tr>
<th>Assessment:</th>
<th>Formative Assessments</th>
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<tbody>
<tr>
<td>Students will be assessed formatively during the each of the six lessons in this unit. The assessments will be in the following areas:</td>
<td></td>
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<tr>
<td>• Effort and conduct in class</td>
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<td>• Proper use of materials</td>
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<tr>
<td>• Participation in blackboard/whiteboard at front of classroom during lesson three.</td>
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<tr>
<td>• Journal work</td>
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<tr>
<td>• Understanding vocabulary during lesson three of dictation.</td>
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<tr>
<td>• Retention of material during lesson four, drawing from memory.</td>
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<tr>
<td>• Use of all principles and elements in application of border design in lesson six.</td>
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</tbody>
</table>
**Summative Assessment:**
- Summative assessment will be made using a quiz to identify shapes and lines and geometric parts that were covered during the unit lessons. Students will be tested on vocabulary and meanings learned in the unit.

**References:**

<table>
<thead>
<tr>
<th>Reference</th>
<th>Source</th>
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