

## Reflections of Pre-Service Elementary Teachers after Learning about an African Culture through Mask-making

Audrey C. Rule  
Sarah E. Montgomery  
*University of Northern Iowa*

---

*Arts-integrated social studies projects can provide meaningful learning about another culture; yet, they are rare in the current assessment-focused climate. Similarly, students are under-exposed to projects that involve spatial reasoning; nonetheless, this skill is important in everyday life and the workplace. This article describes a mixed-methods study of 65 (59 female, 6 male) pre-service elementary teachers in a social studies methods course reflecting on their participation in an African mask-making project with first and second graders that incorporated both arts integration and spatial reasoning. Pre-service teachers identified discussion with others, example masks and images, and taking time as the most helpful mask-making strategies. Most pre-service teachers thought they would (42%) or possibly would (32%) implement mask making with their future elementary students because of deep, meaningful learning and active engagement they experienced and observed during the project. The authors concluded that pre-service teachers need multiple experiences with long-term arts-integrated projects that support the development of spatial skills to be confident enough to undertake them in their future classrooms and suggest that such projects be part of social studies methods courses.*

Keywords: Africa, Arts-integration, Masks, Pre-service teachers, Social studies methods, Spatial skills

---

### Introduction

Integration of the arts into social studies learning can be an enriching endeavor. Academic education generally focuses on verbal-linguistic skills, mathematical ability, and critical thinking. Although these latter skills are very important areas for learning, much of human culture depends upon areas frequently neglected by a “3-R’s” curriculum, such as music, design, dance, feelings, poetry, and architecture (Burnaford, Aprill, & Weiss, 2001). In particular, human values are influenced by emotions, intuition, and rapport rather than pure logic. Art, music, dance, clothing, and architecture express culture most vibrantly, yet are repeatedly ignored in the current assessment-focused educational climate (Coch-

ran-Smith & Lytle, 2006; Goodman, 2006). The arts are, therefore, a perfect partner for social studies topics that highlight cultures. How do we, then, encourage pre-service teachers, who have experienced little arts integration into social studies themselves, to value and feel confident in teaching such a unit?

In this article, we explore the rationale for arts-integrated social studies lessons such as our current study’s African unit, focusing attention to the ways masks represent the cultures of the African people who make and use them. We describe a mask-making project, discussing how it supports national and state standards, along with acquisition of spatial skills and talent in planning. Finally, we explain our methods of data collection and the resulting implications of our study. While this

article highlights pre-service teachers' attitudes and insights regarding the mask making project, a companion article in this issue titled, "Integrating the arts: Pre-service elementary teachers make African masks of six cultures for social studies lessons with primary grade students" (Montgomery & Rule, 2011) addresses more practical aspects of the project.

### **Rationale for Arts-Integration in Social Studies**

The arts support social studies education in three main ways: motivation of students through ownership and creativity, learning of social studies content by producing authentic artifacts, and development of democratic principles and community engagement. These ideas are elaborated in this section.

Recent literature suggests that personal investment in learning promotes motivation and a sense of satisfaction, which has key implications for social studies educators. Steven Wolk (2008) reminded us that learning should be a joyful experience involving student choice and creative projects. He noted, "Having control of our work and using our minds and hands to create something original give us a tremendous sense of agency" (p. 11). Through these artistic endeavors, students develop ideas, make decisions, share thoughts, and are empowered to guide their own exploration of the topic. Playing with ideas fosters stress-reduction, imagination, and social interaction leading to increased learning (Baines & Slutsky, 2009). Additionally, when students are given opportunities to self-direct creative project work, they exhibit higher levels of interest in the content (Hargrove, 2005). Yaron Doppelt (2009), reporting on a complex student-driven engineering design project, discussed the importance of choice and infusion of creativity into authentic hands-on work to increase motivation. Such motivation helped inexperienced students maintain task commitment when the project was complex and addressed challeng-

ing skill areas. Students needed the opportunity to think through the complexities of design in an organized, step-by-step manner; the planning talent (discussed later) was used in the current study to manage the complex mask-making process.

Integration of the arts also can support social studies content acquisition. Middle school students participating in a special social studies project at a charter school (Garran, 2008) researched the history of a culture, followed by fashioning authentic artifacts related to that historic period, such as Roman imperial coins or Egyptian canopic jars. Providing students with these creative options made the work more accessible for students with a range of abilities. Learning through the construction of artifacts helped students connect more deeply with the economic, geographic, political, and historical components of the cultures. Students developed a more profound understanding of Roman and Egyptian cultures, going beyond state standards on these topics of ancient and classical civilizations. Building upon Daniella Garran's work, the current study explored pre-service teacher attitudes related to their involvement in making masks of African cultures.

The arts can support citizenship development and democratic values, two key elements of social studies education (Bresler & Latta, 2009; Goldberg, 2008; Trent & Riley, 2009; Viglione, 2009). Beyond teaching social studies content as noted in the previous example, Meryl Goldberg (2008) stated that the arts help students become invested, participating members of the classroom community. By taking on the role of artist, students become civically engaged in expressing the values of a culture through the arts. Democratic messages of art include freedom, exploration of social roles, and the importance of diverse voices, potentially sparking conversations about tolerance and multiple perspectives. Realizing the democratic potential of the arts in social studies education, the current study used arts

integration to delve into the wealth of diverse lifestyles, beliefs, and artistic expressions of African cultures.

### African Masks

In this article, we explore the attitudes and insights of pre-service teachers making papier-mâché masks of six cultures as part of an arts-integrated social studies unit on Africa taught to first and second graders during a practicum experience. We chose African masks as a focus because these artifacts embody so many of the beliefs and values of the cultures that use them. In this section we discuss some of the symbolism and cultural uses of the masks of the six cultures highlighted during this project.

Most African masks are associated with supernatural beings or spirits such as ancestors, royalty, renowned warriors or hunters; spirits of nature such as animal, mountain, or storm spirits; and other spirits of possession (Hahner, Kecsesi, & Vajda, 2007). When a performer wears a mask and costume (as most masks were not worn in isolation, but with body-covering disguises of cloth, raffia, leaves, etc.) during a ceremony, the person is transformed into the spirit being portrayed. The rhythmic movement of the dancers, the music of the drums, rattles, bells, whistles, and other instruments, and the whispering or roaring voices of the spirits transport the spectators into the presence of spirits that are both feared and welcomed. These spirits may bring disease, famine, crop devastation, and invasion; alternatively, they may help in a crisis, ease social transitions, provide leadership and peace, or bring prosperity and health. The masks and costumes represent the cultural heritage of the group with ceremonies functioning as a method of transmitting this culture to future generations. The following paragraphs present descriptions, images, and explanations of masks executed in the styles of the six cultural groups on which this instructional unit focused.

**Bamana.** The Bamana people of Mali often depict antelopes on their masks. A legendary antelope, *Tyi Wara*, is thought to have taught the Bamana people how to farm (Finley, 1999). Bamana face masks (*ntomo* masks) with a row of four to ten horns on top (arranged like the teeth of a comb) are used for boys' initiation into manhood. These masks feature small mouths and large ears, indicating the need to silently listen to instruction (Rand African Art, 2004). See Figure 1 for an example mask in the Bamana style (All of the masks shown in this article are papier-mâché masks made by the first author in the style of the African people being described). Note the large nose that these people consider to be the center of emotional feeling, as other cultures view the human heart. This mask has painted cowry shells and brass ornamentation.

Figure 1. Example papier-mâché mask in the Bamana style.



**Yoruba.** Yoruba men of southwestern Nigeria and the Republic of Bénin honor the power of all women (including ancestors who are collectively called, “our mothers” or the “Great Mothers”) by wearing *Gelede* masks (Brooklyn Museum, 2007) that sit tilted over the forehead like a cap. A veil extending from the bottom of the mask covers the face. The

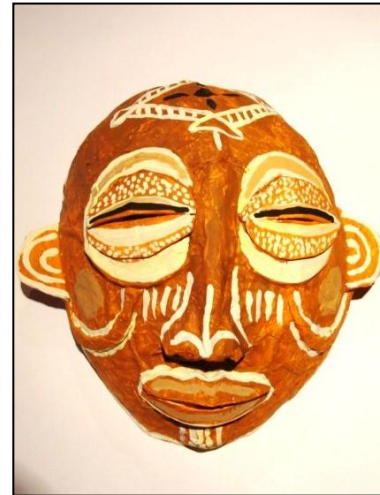
Gelede festival occurs during spring planting time when women’s spiritual life force is needed to help the new crops sprout. See Figure 2 for an example mask in the Yoruba style. This mask shows the corn-rowed hair style and features a snake and bird on the head, representing the power of women. A sheer black veil extends below the bottom rim of the mask to cover the wearer’s face.

Figure 2. Example papier-mâché mask in the Yoruba style.



**Chockwe.** Chokwe people of Angola use a *Mwana Pwo* mask that depicts a female ancestor during coming-of-age ceremonies for young men. During the celebration, the masked dancer moves with elegance in a tight-fitting net costume, displaying good behavior and manners. The mask portrays the ideal of female beauty and grace with a symmetrical, smoothly carved, tattooed face and hair of intricately woven fibers (Finley, 1999). See Figure 3 for an example mask in the Chokwe style. This mask shows intricate scarification patterns.

Figure 3. Example papier-mâché mask in the Chokwe style.



**Luba.** The Luba of the Democratic Republic of the Congo make several styles of circular face masks. One type features slit-like eyes and carved parallel grooves covering the face, being worn with a raffia costume. Male and female pairs of dancers wearing these masks represent the *kijwebe* spirits who connect this world with the domain of spirits. These dancers often appear at the death of an eminent person, such as a chief, to facilitate social transition. Another Luba mask style has round eye sockets accentuated with colorful beads and/ or triangular metallic mosaics. See Figure 4 for an example mask in the Luba style. This mask shows many applied metal triangles and beaded areas.

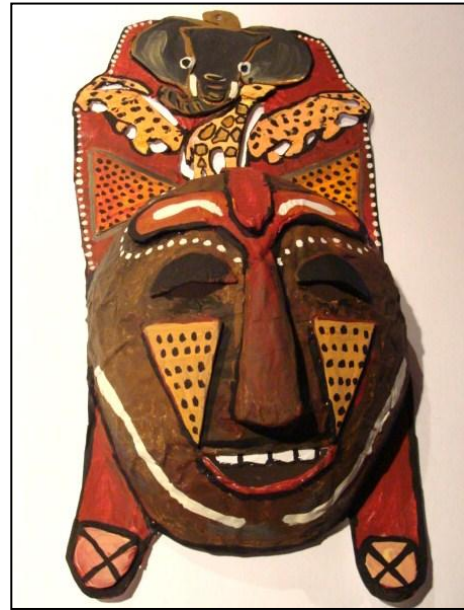
We chose African masks as a focus because these artifacts embody so many of the beliefs and values of the cultures that use them.

Figure 4. Example papier-mâché mask in the Luba style.



**Maasai.** The Maasai of Kenya and Tanzania carve elongate wooden masks that feature intricate facial scarification patterns, signifying beauty, identity, and social status. Some masks are called “kissing” masks because a male and a female figure are shown facing each other on the forehead, representing marital unity. Other masks feature carved animals of the savannah, such as giraffes, elephants, or leopards. See Figure 5 for an example mask in the Maasai style. Most Maasai masks are pierced, as this one is around the outlines of the animals. Animal body patterns are used to decorate the mask.

Figure 5. Example papier-mâché mask in the Maasai style.



**Bembe.** The *Elanda* male association of the Bembe people of Zambia makes some masks in a shield shape with multiple sets of eyes arranged vertically. These are the eyes of ancestors who watch through the mask. The large eye sockets are white and cup-shaped with “coffee-bean” shaped eyes – the small, narrow slit-like openings of the eyes representing the closed eyes of the dead (Hamill Gallery of Tribal Art, 2010). See Figure 6 for an example mask in the Bembe style. This mask is a shield shape with three sets of eyes.

Figure 6. Example papier-mâché mask in the Bembe style.



Studying and constructing an example of these three-dimensional art objects allowed students to practice spatial reasoning, become involved in authentic, hands-on work, and provided the opportunity for a complex extended project, something most of our pre-service teachers had not experienced in social studies during their elementary years. We used the planning talent (discussed in a later section) as formatted by the *Talents Unlimited* thinking skills (Schlichter & Palmer, 1993, 2002) to organize the complex mask-making process.

### The Project

During this arts-integrated unit on Africa, pre-service teachers worked as small teams with each group focusing on a different African culture. Three different sections of social studies methods students, totaling 65 pre-service teachers, participated in this project. These college seniors then taught small groups of first and second graders from three classrooms (each section of pre-service teachers was paired with one classroom) the unit and involved them in mask-making during a practicum component of the course.

The six distinct cultures that were addressed were the Chokwe of the woodlands and savannah of Northeastern Angola, Southwestern Democratic Republic of Congo, and Northwestern Zambia; the Luba of the marshlands, savannah, and forests of Southeastern Democratic Republic of Congo; the Maasai of the grasslands of Southern Kenya and North Central Tanzania; the Bembe (or Bemba) of the forests of Northeastern Zambia; the Yoruba of the rainforests of Southwest Nigeria and the Republic of Bénin; and the Bamana of the arid plains and plateaus of Central Mali (Africa Guide, 2009; Encyclopedia Britannica, 2009; University of Iowa, 2009). These six cultures were chosen because of the large variety of geographic settings they provided for study, as well as their distinctive mask styles. All pre-service teachers made a mask representative of their assigned African cultural group and assisted first or second graders in making their own masks during the practicum experience. More information on the various activities in which pre-service teachers engaged during this project is included in a practice-focused companion article in this issue (Montgomery & Rule, 2011).

The project additionally supported national and state standards for social studies education, as well as addressing important skills of spatial reasoning and planning, which are discussed in the following sections.

### Social Studies Standards

The African mask-making project addressed the National Council for the Social Studies thematic standard of “Culture and Cultural Diversity.” By studying six different African cultures in preparation for mask making, pre-service teachers were able to understand the unique characteristics and systems of knowledge, values, traditions, and beliefs of each group (National Council for the Social Studies, 2009). Additionally, the project met each of the five characteristics of powerful

social studies lessons, namely that instruction be meaningful, integrative, value-based, challenging, and active (National Council for the Social Studies, 1994). The project involved meaningful, sustained examination of each cultural group and integrated social studies with the arts. Throughout the project, pre-service teachers were challenged to collaboratively conduct thoughtful inquiry and to develop a deeper understanding of the values of the cultural groups being studied. Pre-service teachers actively constructed knowledge about the six groups and corrected many of their own misconceptions about the rich cultural diversity of these peoples in distinct geographical areas of Africa.

The project, which took place in Iowa, supported the following state standards: “Understand how geographic and human characteristics create culture and define regions” (Geography, Grades 3-5), and “Understand the role of culture and cultural diffusion on the development and maintenance of societies” (History, Grades K-5). Specifically, by studying the six African cultural groups and making masks, the pre-service teachers explored the distinct environments, lifestyles, religious practices, and cultural characteristics of each group. Besides mask-making, students were involved in dramatizing African literature, crafting costumes with bead collars, constructing African village maps, producing a simulated large-scale African rondavel dwelling, making African musical instruments, and researching and assembling a classroom museum of African artifacts. Making masks offered pre-service teachers an experiential way to further understand how the art of a particular ethnic group is both evidence of their cultural heritage and a method of transmitting their culture to future generations (Iowa Core Curriculum, 2009). Besides addressing important standards, this mask-making endeavor allowed students to practice spatial reasoning skills, another often-neglected part of the school curriculum.

## **Spatial Skills**

Everyday life presents many spatial problems that require complex sequences of operations, for example, determining the best time to telephone overseas, packing a carry-on bag for a week’s vacation, putting together a puzzle, assembling a new vacuum cleaner, or navigating along road systems. Similarly, many occupations rely on spatial skills such as interpretation of diagrams or complex images, pattern recognition, and integration of two-dimensional views into three-dimensional representations (i.e., shopping mall maps, architectural drawings, dress patterns). Spatial reasoning is important, yet currently under-valued in education. The National Research Council of the National Academies assembled the Committee on the Support for Thinking Spatially (CSTS) to address this issue. The committee found,

Spatial thinking is currently not systematically instructed in the K–12 curriculum despite its fundamental importance and despite its significant role in the sets of national standards for science, mathematics, geography, and so forth ... There is a major blind spot in the American educational system...  
...Given the increasing need for life-long learning skills in a technologically changing world, students need opportunities to learn a range of low- and high-tech support systems for spatial thinking (CSTS et al., 2006, p. 6).

Stephen Kosslyn, in a seminal work (1978), enumerated the stages of cognitive processing of spatial information. First, one generates a representation by remembering an object/event or by creating a mental image from words or ideas. This representation is kept in working memory so that it can be used for problem-solving. Next, the person scans the mental representation to focus attention on parts pertinent to the problem. Finally, the per-

son transforms the representation in some way, perhaps by rotating or folding it, or viewing it from a new perspective to solve the problem. Although spatial reasoning expertise is closely tied to a particular knowledge domain, experienced spatial thinkers know what it takes to learn how to operate spatially in new domains (CSTS et al, 2006). Therefore, spatial reasoning practice in any domain can be useful.

The mask-making and practicum teaching activities provided several opportunities for students to practice spatial reasoning. When planning the features of their masks, students drew sketches of their imagined final products. They sequenced spatial components of the mask in logical order, i.e., making the mask shell first and then adding the facial features before painting. When using Internet photographs of authentic masks, they translated two-dimensional images into three-dimensional features. Pre-service teachers also needed to estimate sizes of features and the amounts of paper and cardboard needed, followed by positioning features so the mask appeared symmetrical.

Conceptualizing and sequencing the steps needed to complete a complex spatial task are an integral part of spatial problem-solving. That is why the *Talents Unlimited* thinking skill (Schlichter & Palmer, 1993, 2002) of “planning” was highlighted during this arts-integrated unit.

### Planning Talent

With regard to learning style, pre-service teachers are global (contrasted with analytical) learners who are closure-oriented (goal-focused) (Sloan, Daane, & Giesen, 2004). Many (one-third) are concrete-sequential, being easily overwhelmed by complex unfamiliar tasks. Therefore, providing a structure for organizing the various components of a multi-step project is helpful. Such a framework is one of the *Talents Unlimited* thinking skills called the Planning Talent (Schlichter &

Palmer, 1993, 2002). This five-part thinking skill begins with students telling what the plan addresses, in this case, making a papier-mâché mask in the style of an African cultural group. Then students began to compile a list of materials and equipment necessary during the process. Items were added to this list as the plan was developed. In the third part of the plan, the steps necessary for creating the mask were enumerated in order. As the plan was developed, students were encouraged to identify possible problems that could occur, along with problems they actually encountered. Changes or new steps were added to the plan to address and resolve these problems. These were added in another color or bolded and underlined to show how the plan was improved.

The structured format of this thinking skill allowed students to organize the complex task of forming a three-dimensional mask from paper and glue. An added bonus of this thinking skill was anticipating problems and writing solutions for them into the plan. Not only did this thinking skill help prepare pre-service teachers to tackle multi-step art projects, but it also may be useful in other facets of classroom life. A detailed example of the plan pre-service teachers created is available in the corresponding article in the Practice section of this issue (Rule & Montgomery, 2011).

### Method

Sixty-five mostly traditional-age pre-service elementary teachers of predominantly white Euro-American heritage (59 female, 6 male) who were enrolled in three sections of a social studies methods course taught by two different instructors at the University of Northern Iowa participated in the study. Permission was obtained from the University Human Subjects Committee to conduct the study and from participants for their data to be included.

Each class of pre-service teachers was divided into six groups of three-to-four persons. Then each group was randomly assigned



one of the six African cultures on which this project focused. Pre-service teachers examined one of six sets of cards (the set matching the culture they had been assigned) made by the instructor that featured 12 images of masks of the culture from the Internet and factual information about mask symbolism, manufacture, or ceremonial use on the reverse side. This allowed students to begin to understand the role of masks in their African culture. College students built additional background knowledge about their assigned culture by each identifying an aspect of that cultural group, such as religion, buildings, food, clothing, artwork, landforms, native animals of the region, or vegetation, to research. They then each produced a set of 12 index cards with a pertinent Internet image on one side and a sentence of factual information on the other side (similar to the mask cards provided by the instructor) related to the chosen topic. Information on these cards was shared with group members and the card sets were then used in practicing various classification schemes during methods class and later with elementary students during the practicum experience.

Pre-service teachers began the mask-making process by making a sketch of the features their mask would show. The methods course assignment required pre-service teachers to identify and portray at least five traditional features of the assigned culture in their mask (for example, traditional colors used; shape of eyes, nose, mouth, ears; types of scarification pattern; added decoration/ornamentation; and mask shape/style). The 12-image card set of masks of that culture designed by the instructor was very useful to pre-service teachers in this task. Four 50-minute class periods were used in making and painting the masks, but some students spent additional time on their masks outside of class. A final part of the mask-making was documenting information learned about the African group of people by gluing onto the inside surface of the mask five images related to that culture. Example

items glued here included: a map of Africa with the country in which the people lived highlighted in color, drawings of native animals or vegetation, images of landforms, food, housing, clothing, daily activities, or other artwork. After pre-service teachers had completed their masks and finished the practicum lessons on assisting elementary students in making their own, they reflected on mask-making, answering the following questions:

1. Think about your original views on mask-making when the project was first presented and before we began making the masks. Circle the ending response that fits your situation best. My mask turned out ...  
... a lot better than I had expected.  
... somewhat better than I originally thought it would turn out.  
... about as well as I had expected.  
... not quite as well as I had hoped.  
... much worse than I had anticipated.
2. Please elaborate on the answer you circled above, telling what aspects of the mask turned out differently than or as you had expected and why you had these expectations.
3. What was the most difficult/ challenging part in making your mask?
4. What helped you in overcoming challenging aspects of making the mask? (Tell as many things that helped you as possible).
5. Do you think you will make masks with your future elementary students? Why or why not?

Data were qualitatively analyzed using the constant comparison method. We grouped similar responses to each of the questions into categories while simultaneously comparing all

the responses to a given question. The categories were continually refined as additional responses were read that shifted the category labels and defined new relationships (Dye, Schatz, Rosenberg, & Coleman, 2000; Goetz & LeCompte, 1981). The number of responses in each category was then counted, resulting in a mixed-methods analysis that showed the frequency of ideas appearing in the responses to each question.

### Results and Discussion

Pre-service teachers' masks turned out well; all were able to complete attractive, well-modeled, painted masks that showed the required five traditional features. Table 1 presents the views of pre-service teachers concerning their initial expectations of their completed masks. The final products of most pre-service teachers were better than expected with only two of the 65 pre-service teachers reporting that the results were not quite what they had hoped overall. This shows the initial lack of confidence of pre-service teachers in mask-making. Several pre-service teachers mentioned during class that the example masks shown were very detailed, three-dimensional, and expertly made, expressing that they doubted they could produce a similar mask.

Through making masks and other unit activities, the pre-service teachers taught students about diverse cultures, customs, and geographical settings of these ethnic groups.

**Table 1**

*Pre-service Teacher Responses Concerning the Status of the Masks They Made*

My mask turned out...	Frequency
A lot better than I had expected	22
Somewhat better than I had originally thought	25
About as well as I had expected	16
Not quite as well as I had hoped	2
Much worse than I had anticipated	0
Total	65

Table 2 shows reasons given by pre-service teachers of why masks turned out better than expected. The students largely attributed their successful mask making to their personal enjoyment of the process and their positive performance throughout the project. Students also noted specific elements of the masks, such as colorful paint, dimensionality, and shaped features, in addition to having examples provided, as contributing to the efficacy of this project.

**Table 2**

*Reasons Given by Pre-service Teachers for Why Mask was Better than Expected*

Frequency	Response
14	I enjoyed and performed well in making the mask
11	Mixing of colors or choice / painting of colors was effective
10	3-D shapes on mask gave it effective dimensionality
8	Features that were shaped turned out better than expected
8	Examples were provided that helped in mask construction
7	Attached pieces/ mask base was stiffer or better attached than expected
5	Step by step process led to success
5	The mask accurately portrayed authentic features
1	Given freedom to be creative
1	Shared ideas and learned from others

Table 3 shows reasons given by pre-service teachers for masks not being as skillfully made as hoped. Students struggled with visualizing the complex project and expressed a desire to remake some parts of the masks. They noted their lack of artistic ability and experience with papier-mâché. These results generally point to pre-service teacher's lack of experience in making complex three-dimensional projects that require spatial skills of visualizing the finished product.

**Table 3**

*Reasons Given by Pre-service Teachers for Why Mask was Worse than Expected*

Frequency	Response
26	Hard to visualize how to make such a complex project
20	I am not a very creative or artistic person
16	Wish I could re-do some parts.
15	No experience working with papier-mâché
12	Lack of time- felt rushed
3	Features that were shaped turned out worse than expected
2	Unexpected problem of balloon deflating

The challenges of this project identified by pre-service teachers are presented in Table 4. They likely found the amount of time and patience needed to create and attach features to the mask to be onerous because they have had little experience with long-term projects. Pre-service teachers also reported their difficulty in forming the three-dimensional features. They found it challenging to accomplish the spatial tasks while remaining attuned to details such as cutting, neatness, and painting features.

**Table 4**

*Challenges to Mask-Making Reported by Pre-service Teachers*

Frequency	Reported Challenge
30	Spending so much time on it
30	Attaching features so they stayed attached
19	Forming the three dimensional features
10	Cutting out shapes
9	Keeping it neat
6	Painting skills
6	I felt frustrated, impatient, or unmotivated
5	Deciding how the finished product should look
3	Selecting or mixing paint colors
3	Making the surface smooth with layers of paper

Items, techniques, or strategies reported by pre-service teachers that helped in mask-making are presented in Table 5. The most helpful approach reported by pre-service teachers was discussion of problems and solutions with others. This finding points to the social learning nature of teamwork during social studies in which pre-service teachers' skills were elevated by knowledgeable teammates (Vygotsky, 1989). While specific techniques and strategies were also noted, pre-service teachers generally found looking at other examples of masks, as well as taking additional time, focusing on time management, and having patience, supported their work.

How do we, then, encourage pre-service teachers, who have experienced little arts integration into social studies themselves, to value and feel confident in teaching such a unit?

**Table 5**

*Items, Techniques, or Strategies Reported by Pre-service Teachers that Helped in Mask Making*

Frequency	Response
27	Suggestions from and discussion with others
15	Examples, pictures, and other masks helped me
14	Realized had to put more time into making the mask
10	Using tape or propping pieces with wadded paper
9	Divided or managed my time carefully
7	Needed to have patience
6	Creativity, open mind, generating possibilities, trying different things
6	Lots of glue used
5	Holding and pressing pieces until they were attached
5	Painted several coats and colors, let each coat dry, used different brushes
5	Simplified the mask to make it easier and kept task realistic
4	Best to encase cardboard features in paper before gluing; use paper to anchor edges
4	Outline drawing and planning ahead
4	Tracing around templates and patterns
3	Poked hole in center of eye hole to start
3	Using hand dryer or allowing glue/paint to dry before further work
3	Working with a partner
2	Aleene's glue was stickier
2	Good to cut strips ahead of time and multiple strips at once
2	Made holes to anchor or attach features
2	Vision of finished mask motivated me

Table 6 shows the reported likelihood that pre-service teachers will make a similar project with their future elementary students. Pre-service teachers expressed generally positive

responses to mask making with 48 students out of 65 total students noting that they will or possibly will make masks with their future elementary students.

**Table 6**

*Tally of Pre-service Teachers Who Plan to Conduct Mask-Making Projects with Future Students*

Will you make masks with your future elementary students?	Frequency
Yes	27
Possibly	21
No	17
Total	65

**Table 7**

*Reasons Given for Anticipating Making Masks with Future Elementary Students*

Frequency	Reason Given for Doing a Similar Project with Students
36	Deeper and meaningful learning through the project for both pre-service teachers and elementary students
24	Engaging, fun, thrilling activity for elementary students
7	It is a hands-on activity
5	Higher levels of thinking and problem solving addressed by project
4	I now have an example and know how to do it
3	It was a very creative project

Table 7 lists the reasons pre-service teachers gave for planning to conduct a similar mask-making project with future elementary students. Many pre-service teachers noted the deeper, meaningful learning that occurred during the mask-making project. They commented on the engaging, fun, hands-on work that tapped higher-level thinking and creativity. Four pre-service teachers mentioned that now they have an example mask and the experience of making one.

Table 8 enumerates the reasons why some pre-service teachers thought they might possibly do this activity with future students.

Many remarked that they would only do the project with upper elementary students and/ or with the support of volunteers. This comment is interesting because the first and second graders with whom they worked during their field experience successfully completed their masks and evidenced much learning; the classroom teachers of these students were thrilled with the results of the project. This may be an indication that pre-service teachers need additional experience before they feel confident enough to manage the spatial tasks of mask-making with young children. They additionally noted the need to align the project more directly with the curriculum and “academic” goals.

**Table 8**

*Reasons Given for Possibly Making Masks with Future Students*

Frequency	Reason Given for Possibly Doing a Similar Project with Students
19	Would do only with upper elementary students
17	Need volunteers to help
6	Must fit with curriculum I teach
4	Need to make it more "academic"
3	Supplies will be needed
2	If students were well-behaved
2	Perhaps I will simplify it to paper plate masks

The masks and costumes represent the cultural heritage of the group with ceremonies functioning as a method of transmitting this culture to future generations.

**Table 9**

*Reasons Given for not Making Masks with Future Elementary Students*

Frequency	Reason Given for Not Doing a Similar Project with Students
33	Time-consuming activity that takes away instructional time without satisfying academic goals
9	Work is too much
7	Very complex and challenging
2	Ask art teacher to do it instead
2	Cannot be done whole group
2	Really messy with the glue
1	Balloon allergies are a problem

Table 9 shows reasons pre-service teachers gave for not planning to make masks with future students. Many found the project too time consuming, taking away instructional time. Even some of those who said they did anticipate doing such a project with future students sometimes made this point. This shows that many were unconvinced of the deep learning that took place. This learning was particularly evidenced during a culminating celebration when student groups presented their masks to the whole class, explaining the various features of the masks and their relationships to the traditions and lifestyle of that group of people. Additionally, students had drawn, colored, cut out, and glued inside the mask several images of cultural aspects of the people such as animals present in the environment, foods, and housing styles; these were also explained to the class. Other reasons given by some pre-service teachers for not planning to pursue a similar venture were that the project would be too much work and too complex.

## Conclusion

The completed masks displaying authentic features along with pictorial documentation of culture on the inside surface indicate that pre-service teachers learned much about African culture from the experience. Pre-service teachers were able to tell about the physical environment, traditions, and beliefs of their assigned African group and how these were exemplified in the masks they made, indicating that the masks were now quite significant to them. Besides being meaningful, this project satisfied the four other characteristics of powerful social studies lessons (National Council for the Social Studies, 1994), namely being integrative, value-based, challenging, and active. The project integrated art, spatial reasoning, and the higher-order thinking skill of planning with social studies as students actively researched information and produced a complex, challenging authentic product. Students examined and portrayed many of the values (i.e., beauty through scarification, marital harmony shown by kissing masks, small mouths and large ears for discipline) of their assigned cultures in the masks.

The results of the study show that pre-service teachers, despite their initial fears and lack of experience, can be very successful in making authentic-looking papier-mâché masks in the style of an African culture. The major challenge of visualizing and executing a complex three-dimensional process among these pre-service teachers was ameliorated via participation in the writing of a step-by-step plan of the mask-making process (the *Talents Unlimited* thinking skill of planning), by having many examples available, and through social learning in discussions with others. The visual examples (photographs of masks on the cards sets, sketches of the planned mask, and example masks made by the instructor) allowed these students to keep a visual image in working memory for reference as they worked on their masks. When problems arose, they

could then manipulate these images mentally, as indicated by Kosslyn (1978) in his discussion of spatial problem solving, to re-position features such as eyebrows, ears, or a nose to make their mask better match this ideal mental image. The fact that the pre-service teachers found the project to be very “long,” “time-consuming,” and “complex,” is at least partly related to the intense effort of mentally manipulating images required for those unaccustomed to this task.

Most of the pre-service teachers reported they would likely or possibly conduct a mask-making project with their future elementary students because of the deeper, more meaningful learning they and the elementary students they taught experienced and the engaging nature of the work. Now that they had been through the experience and retained an example mask, they thought they would be more likely to actually complete such a project with students. The step-by-step plan that had been produced and the concrete example they had acquired reduced the complexity of the task.

A smaller, but significant number of pre-service teachers (about 26%) remained unconvinced of the efficacy of the venture, citing the large amounts of time and effort required for such a complex, messy project. This finding points to the necessity of giving pre-service teachers opportunities to experience more than just one long-term, complex project during their teacher preparation courses. In a recent Native American diorama-making project reported in this journal, the researchers (Rule, Lockhart, Darrah, & Lindell, 2010) reported pre-service teachers felt challenged because only half had ever before made a diorama and those persons had merely decorated a shoebox without any three-dimensional construction. The mask-making part of the current project actually only took about four hours, but the pre-service teachers perceived it as excessively long and time-consuming, probably because the work was spread over several weeks and

because they are unaccustomed to this sort of project.

Some pre-service teachers questioned whether an art project such as this really addressed academic goals or standards (as noted in Table 9), complaining that it took away from instructional time. This attitude reflects the educational experiences of this group of mostly traditional age students (generally ages 20-22) whose own elementary school social studies experiences focused on reading, then memorizing, information for assessments (personal communication during class). The majority of our students had never worked with papier-mâché or participated in a long-term, arts-integrated, or spatial skill project (personal communication during class). The pre-service teachers' lack of arts-integrated learning experiences as students and subsequent skepticism about mask-making connects with the seminal findings of Dan C. Lortie (1975) and Deborah Britzman (2003). Specifically, teachers develop their perspectives, beliefs, and attitudes regarding teaching and learning largely before entering formal teacher education programs. These views are developed through a powerful 'apprenticeship of observation' (Lortie, 1975) that pre-service teachers experience as students. Considering the strong influence of these pre-service teachers' school experiences on their beliefs about mask making, it is important that they participate in more arts-integrated curricula if they are going to actually carry these types of projects forward into their future teaching. The active mask-making project described here satisfied national and state social studies standards, while challenging students through integrated spatial reasoning, an under-addressed area of the curriculum (CSTS et al., 2006) in their learning of African culture. Students largely found the arts-integrated work to be meaningful, allowing them to better understand the values of African societies. Complex, long-term arts- and spatial skill-integrated projects are almost absent from

many schools, yet sorely needed; we recommend the reader consider implementing our successful project or a similar one as part of a social studies methods course. A companion article by the authors that describes the practical aspects of this project, provides photographs of completed masks, and presents a step-by-step plan for implementation is available in the "Practice" section of this journal (Montgomery & Rule, 2011).



## References

### Print-based References

- Baines, L., & Slutsky, R. (2009). Developing the sixth sense: Play. *Educational Horizons*, 87(2), 97-101.
- Bresler, L., & Latta, M.M. (2009). Syntegration or disintegration? Models of integrating the arts across the primary curriculum. *International Journal of Education and the Arts*, 10 (28), 1-23.
- Britzman, D. (2003). *Practice makes practice: A critical study of learning to teach*. Albany, NY: State University of New York Press.
- Burnaford, G.E., Aprill, A., & Weiss, C. (2001). *Renaissance in the classroom: Arts integration and meaningful learning*. Mahwah, NJ: Lawrence Erlbaum.
- Cohran-Smith, M. & Lytle, S. (2006). Troubling images of teaching in no child left behind. *Harvard Educational Review*, 76(4), 461-490.
- Committee on the Support for Thinking Spatially (CSTS): The Incorporation of Geographic Information Science Across the K-12 Curriculum, Committee on Geography, National Research Council (2006). *Learning to think spatially: GIS as a support system in the K-12 curriculum*, Washington, DC, The National Academies Press, 314p.
- Doppelt, Y. (2009). Assessing creative thinking in design-based learning. *International Journal of Technology Design Education*, 19, 55-65.
- Finley, C. (1999). *The art of African masks: Exploring cultural traditions*. Minneapolis, MN: Lerner Publications Company.
- Garran, D. (2008). Implementing project-based learning to create "authentic" sources: The Egyptological excavation and imperial scrapbook projects at the Cape Cod Lighthouse Charter School. *The History Teacher*, 41(3), 379-389.

- Goetz, J.P., & LeCompte, M.D. (1981). Ethnographic research and the problem of data reduction. *Anthropology and Education Quarterly*, 12, 51-70.
- Goldberg, M. (2008). Solitary confinement in education. *Arts Education Policy Review*, 110(2), 29-31
- Goodman, J. (2006). *Reforming schools: Working within a progressive tradition during conservative times*. Albany, NY: State University of New York Press.
- Hahner, I., Kecskesi, M., & Vajda, L. (2007). African masks: The Barbier-Mueller collection. New York: Prestel.
- Hargrove, K. (2005). What's a teacher to do? *Gifted Child Today*, 28(4), 38-39.
- Kosslyn, S. M. (1978). Measuring the visual angle of the mind's eye. *Cognitive Psychology*, 10 (3), 356-389.
- Lortie, D. (1975). *School-Teacher: A sociological study*. Chicago, IL: The University of Chicago Press.
- Montgomery, S. E., & Rule, A.C. (in press). Integrating the arts: Pre-service elementary teachers make African masks of six cultures for social studies lessons with primary grade students. *Social Studies Research and Practice*, 6(1).
- National Council for the Social Studies. (1994). *Curriculum standards for social studies: Expectations of excellence*. Washington DC: National Council for the Social Studies.
- Rule, A.C., Lockhart, A.K., Darrah, F., & Lindell, L. (in press). Cereal box dioramas of Native American cultures: A collaborative project. *Social Studies Research and Practice*.
- Schlichter, C., & Palmer, W.R. (1993). Thinking Smart: A Primer of the Talents Unlimited Model. Mansfield Center, CT: Creative Learning Press, 226.
- Schlichter, C.L., & Palmer, W.R. (2002). Talents unlimited: Thinking skills instruction as enrichment for all students. *Research in the Schools*, 9(2), 53-60.
- Sloan, T., Daane, C.J., & Giesen, J. (2004). Learning styles of elementary preservice teachers. *College Student Journal*, 38, 494-500.
- Trent, A., & Riley, J. (2009). Re-Placing the arts in elementary school curricula: An interdisciplinary, collaborative action research project. *Perspectives on Urban Education*, 6(2), 14-28.
- Viglione, N.M. (2009). Applying art and action. *Reclaiming Children and Youth*, 18(1), 16-19.
- Vygotsky, L. (1989). *Thought and language* (A. Kozulin, Ed.). Cambridge, MA: MIT Press. (Original work published 1937).
- Wolk, S. (2008). Joy in school. *Educational Leadership*, 66(1), 8-14.

#### Web-based References

- Africa Guide. (2009). African People and Culture: Bemba. Retrieved from: <http://www.africaguide.com/culture/tribes/bemba.htm>
- Africa Guide. (2009). African People and Culture: Yoruba. Retrieved from: <http://www.africaguide.com/culture/tribes/yoruba.htm>
- Brooklyn Museum. (2007). Collections: Arts of Africa: Gelede mask. Retrieved from: [http://www.brooklynmuseum.org/opencollection/objects/3014/Gelede\\_Mask](http://www.brooklynmuseum.org/opencollection/objects/3014/Gelede_Mask)
- Dye, J. F., Schatz, I. M., Rosenberg, B. A., & Coleman, S. T. (2000). Constant comparison method: A kaleidoscope of data. *The Qualitative Report*, 4(1-2) retrieved February 13, 2010 from <http://www.nova.edu/ssss/QR/QR4-1/dye.html>
- Encyclopedia Britannica. (2009). Bambara. Retrieved from: <http://www.britannica.com/EBchecked/topic/51129/Bambara>
- Encyclopedia Britannica. (2009). Chokwe. Retrieved from: <http://www.britannica.com/EBchecked/topic/114032/Chokwe>
- Encyclopedia Britannica. (2009). Luba. Retrieved from: <http://www.britannica.com/EBchecked/topic/350332/Luba>
- Encyclopedia Britannica. (2009). Maasai. Retrieved from: <http://www.britannica.com/EBchecked/topic/367695/Maasai>
- Hamill Gallery of Tribal Art. (2010). Bembe Masks. Retrieved from: <http://www.hamillgallery.com/BEMBE/BembeMasks/BembeMasks.html>



Iowa Core Curriculum. (2009). Essential Concepts and/or Skills.

Retrieved from <http://www.corecurriculum.iowa.gov/Home.aspx>

National Council for the Social Studies. (2009). Curriculum Standards: The Ten Themes.

Retrieved from: <http://www.socialstudies.org/standards/execsummary>

Rand African Art. (2004). Bamana ntomo mask.

Retrieved from: [http://www.randafricanart.com/Bamana\\_Ntomo.html](http://www.randafricanart.com/Bamana_Ntomo.html)

University of Iowa. (2009). Art and Life in Africa: Peoples Resources.

Retrieved from <http://www.uiowa.edu/~africart/toc/people.html>

University of Iowa. (2009). Art and Life in Africa: Peoples Resources – Bamana.

Retrieved from: <http://www.uiowa.edu/~africart/toc/people/bamana.html>

University of Iowa. (2009). Art and Life in Africa: Peoples Resources – Bembe.

Retrieved from: <http://www.uiowa.edu/~africart/toc/people/Bembe.html>

University of Iowa. (2009). Art and Life in Africa: Peoples Resources – Chokwe.

Retrieved from <http://www.uiowa.edu/~africart/toc/people/Chokwe.html>

University of Iowa. (2009). Art and Life in Africa: Peoples Resources – Luba.

Retrieved from: <http://www.uiowa.edu/~africart/toc/people/Luba.html>

University of Iowa. (2009). Art and Life in Africa: Peoples Resources – Maasai.

Retrieved from: <http://www.uiowa.edu/~africart/toc/people/Maasai.html>

University of Iowa. (2009). Art and Life in Africa: Peoples Resources – Yoruba.

Retrieved from: <http://www.uiowa.edu/~africart/toc/people/yoruba.html>

---

## About the Authors

---

**Audrey C. Rule**, an Associate Professor of Elementary Education in the Department of Curriculum and Instruction at the University of Northern Iowa, Cedar Falls, Iowa. Her research interests include curriculum materials development, spatial skills, project based learning, and enrichment/gifted and talented education. She can be contacted at [audrey.rule@uni.edu](mailto:audrey.rule@uni.edu).

**Sarah E. Montgomery**, an Assistant Professor of Elementary Education in the Department of Curriculum and Instruction at the University of Northern Iowa, Cedar Falls, Iowa. Her research interests focus on the intersection between social studies education and literacy education, particularly the ways in which student production of digital media can support critical literacy and democracy.

### Citation for this Article

Rule, A. C., & Montgomery, S. E. (2011). Reflections of pre-service elementary teachers after learning about an African culture through mask-making. *Social Studies Research & Practice*, 6(1), 58-74.

---