We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists



185,000

200M



Our authors are among the

TOP 1% most cited scientists





WEB OF SCIENCE

Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us? Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected. For more information visit www.intechopen.com



Chapter

Inquiry-Based Fieldwork as Pedagogy for Exploring the World of Gendered Toys and Children's Clothes

Calvin Odhiambo

Abstract

Through the use of a class activity where students survey children's toy and clothing department stores, this chapter examines the use of inquiry-based fieldwork as pedagogy for exploring issues of gender socialization and gender inequality. This chapter starts with a discussion of the literature on inquiry-based teaching and learning, then it discusses how to conduct an effective inquiry-based fieldwork. This is followed by a description of an application of this pedagogy in an Introduction to Sociology class, including the procedures, findings, and analysis, then situates these observations and findings within the existing literature on inequality and learning. The paper then concludes with an evaluation of the effectiveness of this pedagogy, and suggestions to instructors who may consider using this pedagogy.

Keywords: gender, socialization, active learning, inquiry-based fieldwork, inequality

1. Introduction

When asked "What gender are you and why?", many undergraduate students answer the first part of the question by identifying themselves in gender binary terms of either male or female, suggesting that despite strides that have been made by the gay rights movement in the United States, the conceptualization of gender in binary terms is still very prevalent among a cross-section of the population.

With regards to the second part of the question, a majority of the responses students give relate to biological factors such as genetics, hormones, chromosomes, genitalia, etc. This is generally because most undergraduate students assume that gender differences are based wholly or mainly on biological factors – notions that reflect a naturalistic conceptualization of what it means to be human [1]. For the most part, these students have difficulty appreciating the role of the social environment or social structures on human development - a perspective that is at the core of sociology. To help students to critically evaluate these assumptions, instructors have a range of pedagogical strategies they can use. In more traditional settings, the instructor can choose to lecture as a way of covering content. Alternatively, instructors can engage in a collaborative learning process

where students can explore their interests, opinions, feelings, beliefs, and curiosity. In an Introduction to Sociology class, I employed the use of an inquiry-based fieldwork activity to help students appreciate the role of social structures in shaping who and what we are as human beings. The next section discusses the philosophical underpinning of inquiry-based fieldwork (IBF) strategies, and the benefits of the pedagogy. This is followed by a description of the activity I use in my class that applies the IBF strategy and concludes with an evaluation of this pedagogy.

2. What is inquiry-based fieldwork?

Inquiry-based fieldwork refers to the conduct of an investigative work at a field site to achieve particular student learning outcomes. It is an instructional practice where students are at the center of the learning experience and take ownership of their own learning by posing, investigating, and answering questions [2]. IBF is part of a wide array of student-centered teaching and learning approaches that make use of meaningful tasks such as cases, projects, and research to situate learning [3].

Inquiry-based learning is a teaching strategy that finds its roots in constructivist learning theories, such as of Piaget [4], Dewey [5], and Vygotsky [6], among others. While constructivism itself can be traced back to Socrates and his emphasis on inquiry, the theory formally developed in the late nineteenth and early twentieth century with the work of John Dewey. According to constructivists, learning happens as individuals meaningfully construct an interpretation of how things work based on their own pre-existing structures. While Dewey understood that the need for organizing subject matter is an important component of formal education, he repeatedly addressed the need for the learner's personal involvement in exploration, which allows for deeper learning, or "seeking and finding" of one's own solutions [7]. Dewey believed that students should actively be engaged in the learning process. According to Dewey, "if you have doubts about how learning happens, engage in sustained inquiry: study, ponder, consider alternative possibilities, and arrive at your belief grounded in evidence" [8]. Later theorists such as Piaget, Vygotsky, and Bruner connected the work of Dewey to research on cognition and advocated an educational environment in which students actively construct their own knowledge through inquiry and discovery, with guidance from their teachers.

Piaget emphasized the role of developmentally appropriate education and introduced the concept that as people learn, they either assimilate knowledge into their existing mental schemas, or they adjust their mental schemas to accept new knowledge through the process of accommodation [9]. Like Dewey and Piaget, Vygotsky believed that people create their own understanding by assimilating prior knowledge and new external influences. Further, Vygotsky argued that social interaction and critical thinking are two main ingredients of a learning process [10], and that mental development occurs when learners make meaning through the process of internalization, utilizing both external and internal interactions [11]. He described IBL as an "integral part of creating a social constructivist classroom" [12]. On his part, Bruner continued building on this research. He advocated discovery learning, which places the student in problem-solving situations requiring them to draw on past experiences, background knowledge, and existing knowledge to discover facts, relationships, and new information. Bruner argued that by emphasizing discovery, children are able to "learn the varieties of problem-solving, of transforming information for better use", which enables children "to learn how to go about the very task of learning" [13]. Bruner believed that education must be made more

relevant to students' needs at each stage, and that teachers could accomplish this goal by allowing students to actively participate in the learning process [14].

A main difference between inquiry-based learning and traditional teaching and learning methods is that, instead of focusing on the teacher as the repository of knowledge and key to learning, IBL emphasizes the student's role in the learning process. Rather than the teacher telling students what they need to know, students are encouraged to explore the material, ask questions, and share ideas. It enables students to extract meaning from experience and to engage in life beyond the classroom, utilizing skills to gain a deeper understanding of themselves and the social world. Further, IBL uses different approaches to learning, including small-group discussion and guided learning. Instead of memorizing facts and material, students learn by doing, which allows them to build knowledge through exploration, experience, and discussion.

An instructor who chooses an inquiry-based teaching and learning technique can choose from a wide menu of hands-on or active learning strategies which include collaborative inquiry, such as learning and problem solving in small group settings; experiential learning, including direct experience in field settings; service learning, which are direct experiences that seek to solve problems and improve quality of life; integrative learning—generating links among previously unconnected areas; or research or inquiry-based fieldwork [15].

3. The benefits of inquiry-based fieldwork

Many studies have been conducted on the benefits of applying IBL in the classroom. For instance, Guido [16] identifies seven benefits of IBL, arguing that it: (a) reinforces curriculum content, 2) warms up the brain for learning, 3) promotes a deeper understanding of the content, 4) helps make learning rewarding, 5) builds initiative and self- direction, 6) works in almost any classroom, and 7) offers differentiated instruction. Guido examined inquiry from both a student and a teacher's point of view. He explained that from a student's perspective, IBL focuses on investigating an open question or problem, while from a teacher's perspective, inquiry-based teaching focuses on moving students beyond basic curiosity into the realms of critical thinking and understanding. Since IBL is student-focused and relies on students' own thinking and reasoning, the strategy also facilitates students' enjoyment and satisfaction in finding out for themselves something that they want to know, seeing for themselves what works rather than just being told, satisfying and at the same time stimulating curiosity about the world around them, and developing progressively more powerful ideas about the world around them [17]. Other studies have found that students involved in inquiry-based practices reported higher levels of academic self-efficacy, resolved conflicts at a higher rate, were less afraid to take risks, and more likely to continue trying different ways to be successful in areas where they previously failed [18].

Other studies have associated IBL with increase in critical thinking. For instance, Goldston et al. [19] argue that IBL considers the knowledge aspect of learning, yet places great emphasis on critical thinking, problem solving, and communication abilities. Similarly, Hwang and Chang [20] argue that when students learn by means of discovery and investigation in authentic settings, they improve their critical thinking skills.

According to Sockalingam, Rotgans, and Schmidt [21], when students are provided the opportunity to work on a problem, they gain new knowledge and further extend and deepen their current understanding. In addition, when students explore and investigate, they take responsibility for their learning, as they are expected to make decisions and reach conclusions and judgments [22]. Thus, the students take agency over their learning. By being able to explore their own topics, make their own connections, and ask questions, students can learn more effectively.

In his video titled, 7 Skills Students Need for Their Future, Wagner [23] delivers a speech where he identifies a variety of skills needed for student success in a global economy. The seven skills are: critical thinking and problem solving; collaboration and leading with influence; agility and adaptability; initiative and entrepreneurialism; effective oral and written communication; accessing and analyzing information; curiosity and imagination. As Marks [24] explains, in an IBL classroom, students learn, practice, and reflect on these seven skills in an authentic process that imitates those processes used in the real world. Marks concludes that students who are actively engaged in inquiry do not only master content but master habits of the mind.

When done as an Inquiry-based Fieldwork (IBF), the pedagogy enables students to develop information gathering skills such as observation, analysis, interpretation, application etc. Students are actively involved and engaged in the fieldwork activity as they seek answers to the teacher-generated, or student-generated questions and draw their own conclusions [25]. Engaging in IBF enables students to go beyond knowledge acquisition to knowledge construction through questioning, collecting, organizing, analyzing, and interpreting data [26]. Through field investigation, students use their senses to make meaning and construct their knowledge by connecting their findings to their existing knowledge and creating new knowledge in the process. When the classroom is connected to the real world, it makes learning authentic, experiential, and relevant, creating a kind of "lived experience" which is critical in knowledge retention.

4. How to do inquiry-based research

According to John Dewey [8], field experiences are most likely to be academically and intellectually valid if they are carefully planned and monitored, structured to serve specific learning goals, and preceded by orientation and preparation. Students also need ongoing opportunities to reflect actively and critically on what they are learning from the field experience and to assess the results. Consequently, researchers have identified five stages or phases (also called the 5Es) for IBF [27]. These stages include Engagement, Exploration, Explanation, Elaboration, and Evaluation. What is included in each stage is discussed below.

Engagement. IBF involves sparking curiosity, which is the Engagement stage, or what Roberts [28] has called "creating the need to know". This is the pre-fieldwork preparation or planning stage where the instructor sets the stage for the fieldwork and provides the questions that need to be addressed in the field. This first stage is where inquiry questions are formulated. The instructor either provides pre-formulated questions or students engage in the process of constructing the questions. The instructor should ask whether each question is of such a nature as can be answered by following the planned data collection process. This is also the preparation phase. The goal here is to introduce concepts and pique students' interest.

Exploration. IBF involves gathering data, which is the second stage. Gathering data is done during the fieldwork itself. This stage involves locating the evidence, making observations, and collecting data. This is the stage where students carry out hands-on investigation which allows them to acquire a shared set of experiences that they can refer to in order to help each other make sense of the concept under consideration. The fieldwork learning experiences should be structured around the inquiry question(s) and guiding

questions. The inquiry question is the overarching question that drives the fieldwork. It is usually an open-ended question and can be further divided into guiding questions.

Explanation: IBF involves answering the inquiry questions and guiding questions which is the third stage. Part of the value of IBF is collaboration and learning from each other. It is therefore critical that the instructor ask whether the inquiry questions allow student collaboration in small groups? Participants should be placed into small groups and required to collaborate in order to discuss the issues constantly, and to benefit from one another's experience and knowledge. To do this, each task needs to allow different possible answers, and to encourage students to compare their ideas. Students then report to the class. They show evidence for their answers and explain how they arrived at the answers.

The explanation phase focuses students' attention on a particular aspect of their engagement and exploration experiences and provides opportunities to demonstrate their conceptual understanding, process skills, or behaviors.

Extension (or **Elaboration**): This is fourth stage and where students are asked to apply their understanding to new situations, suggest implications or future applications or some social action. In this stage the instructor challenges and extends students' conceptual understanding and skills. Through new experiences, the students develop deeper and broader understanding, more information, and adequate skills. Students apply their understanding of the concept to everyday life. It is important for students to discuss and compare their ideas with each other during this phase.

Evaluation: IBF involves an evaluation or reflection, which is the fifth stage. This is where the instructor informally assesses the effectiveness of the fieldwork in meeting the objective of the class. Instructors can also evaluate student learning with a more formal assessment. This could be done through a test, a report, a presentation, or some other type of assessment. The evaluation phase provides students the opportunity to review and reflect on their own learning and to assess their understanding and abilities. This phase also provides opportunities for instructors to evaluate student progress toward achieving the educational objectives.

5. Application of inquiry-based fieldwork to the gender study

This section describes how I have applied IBF in an Introductory to Sociology class. First, I will describe the characteristics of the class in which this pedagogy has been applied. This is followed by a description of how this IBF activity follows the 5Es laid out in the previous section.

I teach at a mainly commuter, four-year university, where most introductory level classes have a maximum of 30 students (25 for online sections) and 25 for upper-level courses. In order to incorporate a lot of active learning in the classroom, my face-to-face classes typically meet twice a week and run for 75 minutes. Most of the classes have a mix of traditional students (generally between 18 and 21 years of age) and nontraditional students (generally students who are 25 years of age or older), with nontraditional students comprising about 40% of the overall student population. The racial composition of my introduction to sociology classes closely mirrors the racial composition of the freshmen enrolled at our university. Around 40% of my students are black, around 50% are white, and the remainder are divided between Hispanic (around 5%), Asian (around 2%), and others (around 3%). Most of the students who take Introduction to Sociology are freshmen, directly from high school, and who are either in their first or second semester of college. As a result, most of these students come to the class with little if any prior sociological knowledge.

5.1 Engagement

As discussed in the previous section, this is the first stage of the inquiry-based fieldwork where I set the stage for the fieldwork. I use the Gender Study¹ activity in relation to the topic of Socialization. I start the topic by posing the question mentioned at the beginning of this chapter as a way of sparking student curiosity and give them an opportunity to make connections between what they know and the new ideas I am trying to have them learn. Following the exchange with students described in the Introduction section, I have students watch a portion of John Stossel's documentary, "Men, women, and the sex difference: Boys and girls are different." After a discussion of the main arguments of the documentary, I introduce the Gender Study activity and mention to the students that this activity will provide them evidence that contradicts the evidence provided by John Stossel's video.

As I explain to the class, the goal of the Gender Study is to enable students to understand how children learn to "do gender". In other words, how children learn to behave and present themselves in ways that make them easily viewed as male or female. By analyzing the gender makeup of children's toys and clothes, students will have a chance to see how gender socialization works in the real world.

In this activity, students are required to visit 1) a children's clothing store, and 2) a children's toy store to observe what the store sells for boys and what the store sell for girls.

5.2 Exploration

This is the second stage of the inquiry-based fieldwork where students actually collect data. Students typically visit stores that have both a children's clothing and toys departments or sections. Students make a list and describe items intended for boys or girls and if there are any gender-neutral or non-gendered items. In addition, students also observe how clothing and toys are arranged in the store(s) and address related questions such as, how do they know which items are intended for boys and which ones for girls? Students also need to make observations about any differences in the fabric, clothing textures, patterns, decorations, etc. on the clothes. With regards to the toys, students need to pay attention to and describe the kids of toys, colors, designs, etc. These observations are recorded in the Gender Study worksheet (see the appendix for details of the questions which students are given to guide their field observations). In my class, students visit the stores individually, at a time that works best for them. I have found this to be more practical than to try to organize a group field trip. Since most of my students commute to college and have different class and work schedules, it is not practical to coordinate a common fieldwork time. Once the Gender Study Worksheet is filled out, students bring these to the next class in preparation for the 3rd stage - Explanation.

5.3 Explanation

When students bring back their completed Gender Study Worksheets during the next class, they are divided into groups of no more than 5 students each. Their first task is to choose a group leader who will lead them through the discussions in their groups and a recorder (who will record their answers). I then give each group four guiding questions. The first two questions relate to the explanation stage while the

¹ This activity is adapted from Betsy Lucal's activity titled "Gender Socialization" that is described in detail in "Sociology Through Active Learning", edited by McKinney et al. 2001.

third question related to stage 4 and the last question, to stage 5. It is important to note that the questions are posed in increasing levels of complexity, starting with the lower-level thinking question which simply asks students to describe what they observed, to higher-level thinking questions like questions 3 and 4 which require students to engage in critical thinking and application.

To ensure that each group can adequately address all their guiding questions within the allotted time, I randomly assign half of the groups to focus only on toys in their discussions while the other half focuses only on clothes. Students are asked to answer the first three questions as a group but for each group member to answer the fourth question individually by writing their answer at the end of the Gender Study worksheet. Initially, the groups are asked these questions:

- 1. Compare your findings. What patterns do you see? Describe any unusual or unexpected finding by anyone in your group.
- 2. What kinds of things do you think clothes or toys teach children about gender? How do they teach them to be boy or girl? Think about the kinds of clothes or toys intended for each gender and how the clothes might affect, for example, a child's movement or how the toys might affect, for instance, a child's interests.

With regards to the first question, students usually observe that children's toys are divided by colors - mostly darker or primary colors in the boys' section and lighter or pastel colors in the girls' section. Further, boys' clothes are made of tougher fabric such as cotton while girls' clothing are more delicate. In addition, girls' clothes are more fitted and colorful while boys' clothes are buggier, and dull colors. With regards to toys, students usually observe that the toys are also separated by gender. In general, boys' toys comprise of action figures, cars, including police cars and fire trucks, guns, tool sets, athletic or sporting gear such as balls, skateboards, etc. On the other hand, the toys in the girls' section tend to be dolls, dress-up sets, cooking sets, nail sets, domestic appliances, stuffed animals, etc. Students observe that the clothing and toys are very gendered.

With regards to "unusual" or "unexpected" findings, students have generally made two observations. First is that some stores have a gender-neutral section for toys. Toys in this section include video games, swing sets, sand, or beach toys, and electronics, among others. However, students have not observed any store with a gender-neutral clothing section. The second observation is that some clothing items in the girls' section look like some of the clothing items in the boys' section, but there are no clothing items in the boys' section that look "girly".

In response to the second question, students observe that through toys, society teaches girls to be "girly" – more feminine, use make-up, strive to look beautiful, do more domestic labor such as household chores, and be caregivers, while boys are encouraged to be the "fixers" of anything broken. In addition, males are supposed to engage in professions or occupations that put them outside of the house, like being in the military, police, fire fighting, or in construction work, and to be more hands-on. In addition, boys are also expected to exhibit strength like superheroes, and to be caretakers, providers, protectors, and builders.

With regards to clothing, students observe that, in general, girls' clothes suggest that they are supposed to be gentle, be graceful, elegant, and proper, stay inside the house, and be clean, while boys, given the darker colors of their clothes and stronger fabric, are being told by society that they can be rough, play outside, get dirty and move faster, since most of their clothing fit loosely and allow more mobility. In general, students recognize that children's clothes and toys are a way in which society sets out different gender role expectations.

5.4 Extension/elaboration

This is the fourth stage of the Inquiry-based fieldwork and where students are asked to apply their findings and to extend their conceptual understanding. Students are given the guiding question as follows:

3. If you are being sociologically mindful, these findings have to be taken a step further. We cannot stop with the patterns. We have to think about what they might mean and how these patterns connect to other aspects of the social world. Gender is not just a matter of differences between groups of people. Gender, in our society, is a basis for inequality - for assigning people different roles, rewards, responsibilities, privileges, and so on. Discuss how children's toys or clothes can perpetuate (or maintain) this form of inequality.

The extension/elaboration question is usually initially challenging to students, mainly because of the higher-level thinking that it requires. However, after they seek clarification on what the question is asking and some examples, they are usually able to identify several points. First, students acknowledge that the gendered toys and clothing helps to perpetuate gender stereotypes. As one group puts it, toys help to keep stereotypes alive...". What this point indicates is that students are able to see that, for instance, when society walls off the toys and say that "these are only for boys" or "these are only for girls", it essentially limits opportunities for one gender while expanding it for the other gender. Relatedly, students are able to acknowledge that by setting different gender role expectations through toys and children's clothing, society affects the jobs that males and females will have in society and the roles they will play. For instance, one groups states that "Boys are brought up to play roles and have jobs in the more aggressive fields... Girls are raised to play roles and have jobs that cause them to be sensitive, like housework or cleaning or being a babysitter ... "In a related point, another group states that "the toys that children play with can determine what occupation they take on when they are older, such as a boy can play with cop cars and grow up to become a cop while a girl could play with nail sets and become a cosmetologist. There is inequality in the toys that girls and guys are given because the guys are more encouraged to go into the workforce while girls have to be homemakers and often have to go against the society's standards to work outside the house". Some of the groups add that our society gives little or no money to people who do housework while giving a lot of money to people who work outside of the home.

Since the students may not have been exposed to relevant literature, as the groups share their analysis in class, I point out that research has shown that different toys help children to develop different kinds of skills. For instance, children who play with construction toys or toys relating with technology, develop spatial skills that will make them gravitate toward science, technology, engineering, medicine, etc. If, as students observe, most of these toys tend to be in the boys' sections, it helps to explain why in our society these professions, which are some of the best paid professions, are dominated by men. Thus, the gendered toys and clothing that many take as a natural part of society becomes a means for perpetuating gender inequality. Boys are steered into more "masculine" occupations, which just happen to be the more highly paid occupations, while girls are steered into more "feminine" and less highly paid occupations. This suggests that the toys and clothes that children receive during their formative years are intricately intertwined with the gender inequalities observed in society.

5.5 Evaluation

This is the fifth, and final, stage of the Inquiry-based fieldwork and where the instructor evaluates or assesses the extent to which this activity met the objectives of the class. In my Introduction to Sociology class, the evaluation is done by asking students to individually respond to the fourth guiding question.

6. What did you learn about socialization from this activity? Give specific examples to support your answer

Since, as discussed at the beginning of this chapter, most introductory level undergraduate students assume that gender differences are based wholly or mainly on biological factors, I am often curious to see how this IBF activity influences perceptions and expands their knowledge about socialization. To gauge individual students' understanding, I ask students to complete this question individually.

Based on responses from the students, the effect of this IBF activity on their perception about socialization is always very clear. In general, students are able to make connections between toys and clothing and socialization. For instance, a student states "What I learned is that girls and boys are taught from an early age how to interact, what to do...etc., all dealing with socialization. Girls learn from toys and easy bake ovens to be good homemakers. Guys learn to like sports and outdoor activities..." Another student states "I learned that children learn how to assume the role of male or female from toys and clothes. For example, a girl playing in a toy house with appliances learns to assume the role of the typical female by taking care of the house. On the other hand, a boy playing with cars and superheroes learns to be strong and confident". The idea that children's clothing and toys influence who they will be in the future is a thought that came cross clearly in the students' comments. For instance, another student commented that "from this group exercise, I learned that the toys children play with when they are little could lead to their occupation when they are grown...". This comment is referring to the concept of anticipatory socialization which occurs when people take on the values and standards of groups that they aspire to join, to ease their entry into the group. Clearly, these children are involved in anticipatory socialization through the toys and clothing as they learn the norms and role expectations they will be required to evince when they are older.

Other students recognized the societal influence on socialization. For instance, one student stated that "Society has a major effect on how boys and girls become masculine and feminine". Another student stated that they learned that "society has a big impact on how different males and females have to be...". This is important, considering the naturalistic conceptualizations of what it means to be a human being, that many undergraduate students come to college with. The acknowledgement that society plays a major role in what it means to be feminine or masculine reflects a major shift in perceptions.

Still, other students acknowledge the fact that socialization starts early in the life of human beings. For instance, one student states that they have learned that "Socialization starts at an early age...". Another student states that "from this group exercise, I have learned that socialization starts with childhood influences from clothes and toys...".

7. Discussion

The direct comments from students suggest that students did not only understand how children learn to "do gender", but also comprehended how gender and socialization work in real world. During semesters that I have not assigned a final exam in the Introductory to Sociology class, I have assigned a final reflection paper. Part of this assessment requires students to identify two activities we have done through this class which have left a lasting impression in their mind. The Gender Study is one of the activities that students identify as leaving a lasting impression in their mind. Considering that the final reflection paper comes at the very end of a 16-week semester, yet the topic of socialization is usually discussed around the third week of classes, the fact that students are able to identify the Gender Study activity at the end of the semester shows how an active learning activity such as this inquiry-based fieldwork can create a "lived experience" which is critical for knowledge retention. The fact that this activity provides students with real-world experience with a classroom subject matter greatly helps to reify the concept of gender socialization in the minds of the students, to fostering long-term learning, improve knowledge retention, and increase student engagement. To extend Ghomal [29], with inquiry-based fieldwork, students are engaged in the learning process and are making sense of the world around them. Clearly, the students in the Gender Study are making sense of the world of children's toys and clothes in ways that would not have been possible through the use of a traditional lecture.

A value of an Inquiry-based fieldwork activity such as the Gender Study is also that students are not just students, but also researchers. They are creating their own knowledge by making observations and engaging in deductive thinking to reflect on or analyze the findings. Being able to reason from the children's toys and clothing to differences in men's and women's occupations and to gender roles is a classic example of deductive thinking and critical thinking that should be the intended goal of any meaningful education.

Beyond inculcating research skills, this inquiry-based fieldwork also improves student engagement, promotes teamwork, and caters to different students' learning styles. This method has been described as "an alternate approach to pedagogy which is more socially equitable, which recognizes that there are differences in backgrounds, preparation, and knowledge among students, and capitalizes on individual and diverse opinions" [30]. What Summerlee is pointing out here is the fact that the lecture method of teaching targets a certain group of students, while leaving behind those students who have different learning styles. In the classroom, one way in which this becomes manifest is that student participation increases greatly during the week when we do this activity. Even students who are usually more reticent to speak in class "find their voice".

In spite of its high success, careful planning is critical to the success of fieldwork. Instructors planning to use this pedagogy should pay careful attention to the four major stages required in planning, including 1) pre-fieldwork stage, 2) the fieldwork stage, 3) the post-fieldwork stage, and 4) the evaluation stage. Since Section 5 of this chapter provides details that correspond to these stages of preparation, I will only provide additional thoughts relating to the pre-fieldwork stage.

The pre-fieldwork stage is where background research and reconnaissance of the field site become important. Among things to consider in this stage would be risk-assessment to ensure student safety. The alignment of the learning objectives to the syllabus goals is crucial. This is also the stage for constructing the guiding questions which can either be teacher-generated or student-generated. Since in my class, students go to the fieldwork at their individual times, there is no need to try to coordinate a common time for the visit. Since the observation is supposed to be unobtrusive, I have not found a need to reach out to the store to seek permission for the visit. However, other instructors may wish to seek permission from the store management to enable students to freely make notes without fear. Still, the instructor should also be prepared for the likelihood that the store management will decline, especially if the taking of notes is

misconstrued for something else. In my class, I remind students to be careful to take the notes surreptitiously and be ready to politely explain to any store associates or management if asked. Students also know to comply with any requests to not take any notes at the store if the store management opposes notetaking, for whatever reason. In that case, I encourage students to record their observations as soon as they exit the store(s).

8. Conclusion

Field based pedagogy is common in fields such as earth science, ecology, environmental science, archeology, geology, geography, biology, and other natural sciences, where students work "in the field" to observe and collect materials needed for learning. However, this pedagogy is not very well developed or utilized in the social sciences and other disciplines where much of the learning occurs in a classroom, laboratory, library, or computer room. As this chapter has demonstrated, inquiry-based fieldwork incorporates several aspects of active learning pedagogy which has been associated with effective teaching and learning. While this chapter understands that there is a place for a good and interactive lecture in dissemination of learning, inquiry-based teaching and learning ranks higher than traditional lecture in terms of its effectiveness as a method of instruction.

Conflict of interest

The authors declare no conflict of interest.

Appendix

SOCY 101: INTRODUCTION TO SOCIOLOGY GENDER STUDY WORKSHEET

Due in class on Tuesday, October 22

Instructions: Print and fill out both Part I and Part II of this worksheet to record your observations when you visit a children's clothing and toy department store to observe what the store is selling for the different sexes. Create appropriate spaces in between the questions as you need to adequately address the questions.

Your name______ Name of the store(s) you observed______ PART I: CLOTHES Can you tell which clothes are for girls versus boys? If 'yes' how? Pay particular attention to and describe:

a. the items of clothing offered for:

BOYS: GIRLS:

b.the fabrics/clothing textures used for:

BOYS: GIRLS: Pedagogy - Challenges, Recent Advances, New Perspectives, and Applications

c. the patterns/decorations used for:

BOYS: GIRLS:

d.any other differences between clothes for,

BOYS: GIRLS:

Are there any gender-neutral clothes (in other words, clothes that appear to be for both boys and girls)?

Describe them:

PART II: TOYS. Can you tell which toys are for girls versus boys? If 'yes' how? Pay particular attention to and describe...

a. the kinds of toys offered:

BOYS: GIRLS:

b.the colors, designs (etc.) of toys meant for:

BOYS: GIRLS:

c. any other differences between toys for:

BOYS: GIRLS:

Are there any gender-neutral toys (in other words, toys that appear to be intended for both boys and girls)?

```
Describe them:
```

Author details

Calvin Odhiambo University of South Carolina Upstate, Spartanburg, South Carolina, United States

*Address all correspondence to: codhiambo@uscupstate.edu

IntechOpen

© 2022 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

References

[1] Odhiambo C. The name game: Using insults to illustrate the social construction of gender. College Teaching. 2012;60(1):25-30. DOI: 10.1080/87567555.2011.619015

[2] Caswell CJ, LaBrie DJ. Inquiry-based learning from the learner's point of view: A teacher candidate's success story. Journal of Humanistic Mathematics. 2017;7(2):161-186. DOI: 10.5642/ jhummath.201702.08

[3] Avsec S, Oceanic S. A path model of effective technology-intensive inquirybased learning. Educational Technology & Society. 2016;**19**(1):308-320. Available from: https://www.jstor.org/stable/ jeductechsoci.19.1.308

[4] Henson K. Foundations for learnercentered education: A knowledge base. Education. 2003;**1124**(1):5-6. Available from: https://www.itma.vt.edu/courses/ currip/lesson9/Henson2003Learner CenteredEduc.pdf

[5] Savery JR. Overview of problembased learning: Definitions and distinctions. Journal of Problem-based Learning. 2006;1(1):9-20. DOI: 10.7771/ 1541-5015.1002

[6] Mayer SJ. Dewey's dynamic integration of Vygotsky and Piaget. Education and Culture. 2008;**24**(2):6-24. DOI: 10.1353/eac.0.0026

[7] Dewey J. Democracy and Education. In: An Introduction to the Philosophy of Education. New York: Free Press; 1916. Available from: https://www.gutenberg. org/ebooks/852

[8] Dewey J. How We Think. New York:D.C. Heath & Co. Publishers; 1910.Available from: https://pure.mpg.de/rest/

items/item_2316308/component/ file_2316307/content

[9] Han S, Bhattacharya K.

Constructionism, learning by design, and project-based learning. In: Orey M. (ed.) Emerging perspectives on learning, teaching, and technology. Zurich; 2010. p.127-141 [cited 2021 Sept 5]. Available from: https://textbookequity.org/ Textbooks/Orey_Emergin_Perspectives_ Learning.pdf

[10] Liu C, Chen I. Evolution of constructivism. Contemporary Issues in Education Research. 2010;**3**(4):63-66. DOI: 10.19030/cier.v3i4.199

[11] DeVries R. Vygotsky, Piaget, and education: A reciprocal assimilation of theories and educational practices. New Ideas in Psychology. 2000;**18**(2-3):187-213. DOI: 10.1016/S0732-118X(00) 00008-8

[12] Powell K, Kalina C. Cognitive and social constructivism: Developing tools for an effective classroom. Education. 2009;**130**(2):241-251. Available from: https://www.presentica.com/doc/ 11808579/cognitive-and-socialconstructivism-developing-tools-foran-document

[13] Beshears CM. Inquiry-Based Instruction in the Social Studies: Success and Challenges [Dissertation on the Internet]. USA: University of Nebraska; 2003. Available from: https:// scholarworks.uark.edu/cgi/viewcontent. cgi?article=1620&context=etd

[14] Takaya K. Jerome Bruner's theory of education: From early bruner to later bruner. Interchange. 2008;**39**(1):1-19. DOI: 10.1007/s10780-008-9039-2 [15] Schneider CG, Shoenberg R.
Contemporary Understandings of Liberal Education: The Academy in Transition.
Washington, DC: Association of American Colleges and Universities;
1998. Available from: https://secure.aacu. org/AACU/PubExcerpts/Conte.html

[16] Guido M. What is Inquiry-Based Learning: 7 Habits & Strategies You Need to Know. 2017. Available from https:// www.prodigygame.com/main-en/blog/ inquiry-based-learning-definitionbenefits-strategies

[17] Harlen W. Inquiry-based learning in science and mathematics. Review of Science, Mathematics and ICT Education. 2013;7(2):9-33. Available from: https://efe.library.upatras.gr/index. php/review/article/viewFile/2042/2085

[18] Gu X, Chen S, Zhu W, Lin L. An intervention framework designed to develop the collaborative problemsolving skills of primary school students. Educational Technology Research & Development. 2015;**63**(1):143-159. DOI: 10.1007/s11423-014-9365-2

[19] Goldston MJ, Day JB, Sundberg C, Dantzler J. Psychometric analysis of a 5E learning cycle lesson plan assessment instrument. International Journal of Science and Mathematics Education. 2010;**8**:633-648. DOI: 10.1007/ s10763-009-9178-7

[20] Hwang GJ, Chang HF. A formative assessment-based mobile learning approach to improving the learning attitudes and achievements of students. Computers & Education. 2011;**56**:1023-1031. DOI: 10.1016/j.compedu.2010. 12.002

[21] Sockalingam N, Rotgan J, Schmidt HG. Student and tutor perceptions on attributes of effective problems in problem-based learning. Higher Education. 2011;**62**(1):1-16. Available from: https://link.springer. com/article/10.1007%252Fs10734-010-9361-3

[22] Jonassen DH. Toward a design theory of problem solving. Educational Technology Research and Development.
2000;48(4):63-85. Available from: https://www.jstor.org/stable/30220285

[23] Wagner T. 7 Skills Students Need for Their Future. Asian Society Partnership for Global Learning; 2009. Video: 29 min. Available from: https://www.youtube. com/watch?v=NS2PqTTxFFc

[24] Marks DB. Inquiry-based Learning: What's your question? National Teacher Education Journal. 2013;**6**(2):21-25. Available from: https://https://web-pebscohost-com.uscupstate.idm.oclc.org/ ehost/pdfviewer/pdfviewer?vid= 5&sid=6285120c-b1d6-46be-960a-6ad800f97533%40redis

[25] Sims HH, Liow SSG. Inquiry-based fieldwork for children's localities and beyond in primary social studies: Student teachers' understandings, concerns, and suggestions. In: Sim TYH, Sim HH, editors. Fieldwork in Humanities Education in Singapore. Singapore: Springer; 2021. pp. 113-129. DOI: 10.1007/978-981-15-8233-2_6

[26] Sim TYH, Sim HH. Fieldwork in Humanities Education in Singapore. Singapore: Springer; 2021. DOI: 10.1007/978-981-15-8233-2

[27] Bybee RW, Taylor JA, Gardner A, Van Scotter P, Powell JC, Westbrook A, et al. The BSCS 5E Instructional Model: Origins and Effectiveness. Colorado Springs: BSCS; 2006. Available from: http://www.fremonths.org/ourpages/ auto/2008/5/11/1210522036057/ bscs5efullreport2006.pdf

[28] Roberts KA. Ironies of effective teaching: Deep structure learning and constructions of classrooms. Teaching Sociology. 2002;**30**(1):1-25. DOI: 10.2307/3211517

[29] Gholam A. Inquiry-based learning: Student teachers' challenges and perceptions. Journal of Inquiry & Action in Education. 2019;**10**(2):112-133. Available from: https://digitalcommons. buffalostate.edu/cgi/viewcontent.cgi?arti cle=1165&context=jiae

[30] Summerlee AJS. Inquiry-based learning: A socially just approach to higher education. Journal of Human Behavior in the Social Environment. 2018;**28**(4):406-418. DOI: 10.1080/ 10911359.2018.1438956

