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Practitioner Article

What a Doll: Contextualizing Artifacts of Play through Storytelling & in the Classroom

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ABSTRACT

We contextualize the notion of using popular culture artifacts (dolls) to extend learner engagement in K-12 classrooms. We look intently at the Friends Forever Club and especially turn our attention to three Friends Forever Club dolls and their connected scientific disciplines: Viera (mineralogy & geology), Alanis (computer engineering), and Carina (astronomy). We first consider the dolls as connectors that extend learners' play to their engagements in reading, writing, imagining, and re-imagining identities associated with various Science Technology Engineering Arts and Math (STEAM) activities. We also idealize the dolls as western cultural (because they are toys imbedded within the United States culture and the United States cultural practices of children's play) artifacts (because they are objects that are imbedded in children's lives in ways that other dolls, such as Ever After High, Barbie dolls, and others are imbedded in lives) as identity connectors. These, as identity connectors, can help to extend learning engagement in the classroom and specifically, female learners' engagement and connections to subject content in the classroom. The central questions of *How can artifacts such as the Friends Forever Club dolls engage learners with subject area content? How can doll play help to facilitate spaces in which young women's evolving identities can be privileged and important classroom practices be enacted? How can the Friends Forever Club dolls mediate literacy and other practices within the classroom?* are the foci of this article.

KEYWORDS

Artifactual literacies, dolls, literacy, STEAM, careers, science, women

Our research study grew out of care for learner engagement and from a spark to remember and share our own doll stories and identities formed in early childhood play, settings, and localities. Our positions as pre-teacher education students (Faith) and university instructors (Christina and Jennifer) we feel enrich this study and have allowed us to write from differing perspectives while focusing on the important matter of how toys – specifically, dolls - as artifacts, can allow for connections to individuals' experiences and imaginations, mediate ideas, and help to facilitate classroom learning and response activities.

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Figure 1: Friends Forever Club Dolls

Conceptual Framework

In this article, we use Artifactual Literacies (Pahl & Rowsell, 2010) as a foundational platform of knowing that guided our writing, so that toys (and especially dolls, as imbedded artifacts within lives, within classroom spaces) can be reimagined as mediators to extend learning in a classroom when teaching and engaging in subject matter in/related to the sciences. We also discuss possibilities for the dolls, as artifacts of play, to help facilitate spaces in which learners' own identities and imaginations can be naturally woven together with writing and storytelling classroom activities and experiences, furthering multiliteracy practices. We consider artifacts as dynamic because they relate to our individual stories of play from childhood experiences because they are entry points to connecting our remembering to crucial events/times in our lives (Cooper, 2023; Romero-Ivanova, 2022; Ivanova, 2014). Artifacts' dynamicity involves learners' abilities to speak and story connections (Pahl & Rowsell, 2010). The artifacts become agentive as they facilitate re-storying of the remembered and meaningful practices in our lives (Romero-Ivanova, 2022; Pahl & Rowsell, 2010).

Literature Review

Doll play involves the convergence of imaginations, lived experiences, and life worlds but it also affords opportunities for learners' development in the classroom context. In this section we provide discussion on knowledge that relates to social development, transformation, and identities, which importantly relate to ideas for extending learning which have developed (and ones that we divulge in the discussions section of this article) because of this research.

Brain Development & Social Processing

Playing with dolls activates different facets of brain development and social processing (Keating et al, 2023; Hashmi et al., 2020). Doll play has been shown to activate key social processing regions of the brain that facilitate imaginative play, in turn fostering empathy and social

information processing skills when relating to others (Keating et al, 2023). Artifacts such as dolls, when used even in solo play can facilitate care and empathy (Hashmi et al., 2020). Doll play encourages children to explore emotions and thoughts.

Doll Play as Transformative Play

Toys, "are particularly meaning-laden texts that invite identity transformation as children animate the materials and project play identities through them" (Wohlwend, 2009, p. 76). Contextually, dolls in the classroom become agentive artifacts in a literacy practice in which learners can make and remake identities, and script and perform imaginations (Wohlwend, 2009). Doll play enables teachers to diversify their classroom climates, using different dolls of various ethnicities and genders (Sturdivant, 2020; Yoon, 2020).

Female Identity

There has been a significant shift in the percentage of females in the workforce over the last hundred years in the United States. In 2022, over 56% of the workforce was female (Bureau of Labor Statistics, 2023) versus in 1920 when only about 20% of the workforce was female (U.S. Department of Labor, n.d.). According to the U.S. Department of Labor Women's Bureau the top two professions of females are registered nurses and elementary and middle school teachers. Since 1920 the professions most held by women have not changed (U.S. Department of Labor, n.d.). According to the National Girls Collaborative Project (NGCP) (2024, February 26), only 34% of the science, technology, engineering, and math (STEM) workforce is female. Groups such as the NGCP and American Association of University of Women are helping to address this gap within the workforce through creating opportunities for young girls to meet female scientists, recommending toys to inspire girls in STEM, and other resources and supports (NGCP, 2024).

Identity for youth may be impacted most during high school. According to Tan and Maeda (2021), "High school is a critical period for identity development, since the growing academic difficulty level may challenge student ability, achievement, and identity in science" (para. 3). Science formation identity is heavily affected by influential family members and teachers Positive science identity during high school is highly influential in a student choosing a future STEM major and career, as well as retaining the person in that field (2021).

Due to a fixed mindset of teachers that certain students, such as females, African Americans, and Hispanic/Latinos are not good at science, it may be difficult for these students to identify as future scientists (Tan & Maeda, 2021). Based on Tan and Maeda's research, students with teachers practicing growth mindset can assist students to further develop their sense of science identity. Research has also shown that teachers promoting a growth mindset have students who persevere through difficulties and attempt more challenging topics (Bardach et al., 2024). Using resources such as those offered by NGCP will enhance and promote self-efficacy in students, especially females, to consider a future in a STEM profession (Tan & Maeda, 2021).

Ways of Re-storying

We went about thinking about researching and writing about the topic of doll play within classroom contexts in different ways. We thought about how a young girl would identify with a Friendship Club doll and how she might want to use it. We placed each of our mindsets into that of young girls, which added to our own stories of doll play - how we each remember interacting with our dolls and other toys that were associated with our individual identities during times of

our childhood experiences. Wohlwend (2018) posits that children's play can be imagined as a kind of literacy because it can extend to reading, writing, and speaking.

We considered learning about our childhood selves through artifacts (and for the sake of this article, toys as artifacts) – sentimentality – our habitus, our stories, our literacy practices. As Pahl and Rowsell (2010) note, objects [artifacts] and the uses of them relate to habitus, or how an individual lives, behaves, and interacts with others and experiences in their lives. Forman-Brunell (2012) also posits that play (and particularly, doll play) relates to habitus and identity: "In addition to production and self-expression, dolls are also sites of identity formation seen as shifting, performative, and prescriptive" (p. 9).

We wanted to know how students' interactions with the dolls would implicate their sense of habitus and the nature of their play with the dolls as well as shed light on their identity play: would students take on the imbedded Science, Technology, Engineering, Art, and Math (STEAM) identities of the dolls, would they imprint their own identities onto the dolls and in the doll play, and would there be created identities based on interactions with the dolls?

While writing, we used a critical lens to view doll play within the classroom. We conceptualized students' doll play as textual (Wohlwend, 2012 & 2009) and multimodal literacy practices (Almeida, 2020). Students' potential activities and interactions related to reading each of the dolls' backstories and learning about STEAM careers (textual), as well as students' writing connective stories about the dolls (multimodal) could reveal children's interests and imaginings about future careers and identities.

We thought of doll play as translational (Lockman & Tamis-LeMonda, 2021), because students – through their practices of playing with dolls can bring the outside world into the classroom (careers in sciences, women in sciences) through the above-mentioned textual and multimodal literacy practices. The current shortage of females in the sciences prompted us to write; it provided a necessary springboard for our topic and led us to critically examine current literature.

Storytelling

Storytelling as a Literacy Practice

As posited by Pahl and Rowsell (2010, p. 3), literacy "involves many different scripts, and it can exist in many different languages and settings." In this article, we propose the idea of the Friends Forever Club dolls mediating classroom spaces: as both connectors and mediators, the dolls can be considered in authentic classroom practices in which language scripts of their own backstories (see the following sections) can dynamically be used as springboards to engage learners with the knowledge of different STEAM careers and classroom activities. As learners express their own ideas, they create imaginative new identities and scripts in the process, re-storying the Friends Forever Club dolls' narratives in multimodal ways. As connectors to imagined or real identities (mentioned in the previous section), students can learn about STEM careers through the dolls' embedded stories, which can extend into activities related to STEAM literacy. Career vocabulary, fluency, and reading comprehension, which relate to Indiana's Science of Reading (SoR) (IDOE, 2025) initiative, can be used to research specific careers related to astronomy, computer technology, geology, art, and other disciplines.

Viera the Mineralogist and Geologist

"Viera has a passion for crystals and gemstones! She loves making art, being outdoors, and adding more crystals and gemstones to her growing collection. When she grows up, she dreams of becoming a Mineralogist and Geologist." (Friends Forever Club description)

Figure 2: Friends Forever Club Doll Viera

Evelyn's Doll Story. I grew up as an avid doll player. I loved exploring the depths of my imagination through doll play. Dolls enabled me to explore my own dreams and interests by being exposed to many different diverse dolls I could learn about and relate to. My favorite doll brands growing up were Barbie, Monster High, and Bratz dolls. Each of these doll brands had accompanying movie franchises that explored the personalities of the characters. These brands also created diverse dolls that had different careers, hobbies, interests, dreams, and backgrounds. I always loved creating my own stories for my dolls, but I think the companies did well in giving each character their own personality for children to be able to explore and relate to. I was able to learn about myself through dolls and all their quirky differences. Barbie taught me I could be anything I wanted to be, Monster High taught me what makes me unique also makes me fierce, and Bratz taught me the importance of friendship. Dolls have and will always be so much more than a toy. They are tools for exploration in identity for young girls across the globe.

Carina the Astronomer

"Carina has a passion for space! She loves stargazing and studying Astrology [Astronomy]. When she grows up, she dreams of becoming an Astronaut and exploring the galaxy." (Friends Forever Club description)

Figure 3: Friends Forever Club Doll Carina

Jennifer's Doll Story. Growing up, I cherished several beloved toys that still invoke positive memories to this day. For five years, I was fortunate enough to receive a Cabbage Patch doll from my aunt and uncle at Christmas. Although I enjoyed changing my dolls' clothes, reading books to them, and rocking them to sleep, my Fisher-Price play sets were my most treasured toys. Among them were my well-loved hand-me-downs, the vintage Fisher-Price Farm and Fisher-Price House (See Figure 4 and Figure 5) dating back to the 1960s. These play sets and figures served to normalize my childhood milieu.

Figure 4: Vintage Fisher Price Little People 1960's Yellow Blue Play Family House

Figure 5: Vintage Fisher Price Little People Family Farm 1960's Play Set

Residing on a small dairy farm in rural Indiana, the Fisher-Price Farm and House became staples in my imaginative play, allowing me to relive cherished moments alongside my father as he did his chores. Supplementing its array of farm animals with additional Holstein cows, I meticulously reenacted daily routines, from family meals to outdoor chores to bedtime rituals. This imaginative play, which also bolstered my own habitus (Pahl & Rowsell, 2010) of growing up on a farm fostered a deep sense of connection and identity within my rural, family-centered, two-parent upbringing. It bolstered my habitus of growing up on a farm by offering performative testimony through using toys to act out farm chore behaviors.

Conversely, the two-story Fisher-Price Hospital circa 1976 (Figure 6) and the brick Fisher-Price Sesame Street Townhouse circa 1974 (Figure 7) I was given introduced me to urban environments that I had only read about. The compact, single-level structure of our local hospital stood in stark contrast to the complexity of the toy hospital, complete with elevators, stretching my imagination beyond the confines of my reality. Similarly, the concept of a townhouse with a set of steps leading out onto city sidewalks seemed alien, challenging my understanding of urban living. The language of play (Toub et al., 2018), the embedded vocabulary of the different real and toy structures, opened a world of imaginative play for me.

Figure 6: Vintage Fisher Price Little People Hospital

Figure 7: Vintage Fisher Price Little People 1970s Play Family Sesame Street House

While these play sets diverge from the discussion of dolls in this article, they nonetheless contributed to the validation of my identity. The Friends Forever Club Carina doll epitomizes this notion, designed to inspire exploration among children aged three and older. As articulated on its packaging, "Carina has a passion for space! She loves stargazing and studying Astronomy. When she grows up she dreams of becoming an Astronaut and exploring the galaxy" (Dollar Tree, 2025). Featuring a Black female protagonist with glasses and natural hair, this doll fills a critical void, particularly considering the underrepresentation of Black female scientists (Varma, 2018). By presenting a relatable model, Carina may ignite curiosity and validate aspirations for space exploration among young girls seeking characters who resemble them and share their passions.

It was evident by Carina's design that I could connect with her due to her starry dress and night-sky packaging. These features were a tangible way to connect an interest of mine and my family. My five children have all shown an interest in the night sky and solar system. My boys were curious about NASA's Mars exploration expeditions, whereas my daughter was intrigued by the mythological stories about the constellations. All of them were fascinated by the changes in our seasonal night sky. Carina also serves as a nostalgic reminder of when my elementary school provided a traveling sky lab for us to learn about planets and our seasonal night sky. This is a fond memory of mine because of the excitement and curiosity my teacher shared with all of us. Overall, Carina became more than just a toy that I could share with my children and others; it is a symbol of shared interests, family bonding, and a physical reminder of the memories that were integral in finding the joy in learning. Carina is a powerful resource in nurturing curiosity and connections.

Alanis the Computer Engineer

"Alanis has a passion for technology! She loves playing video games, building toy robots and drones, and playing soccer. When she grows up, she dreams of becoming a Computer Engineer and maybe an online influencer." (Forever Friends Club description)

Figure 8: Friends Forever Club Doll Alanis

Christina's Doll Story. Growing up amid roaming tumbleweeds, beautiful mango sunsets, and desert warmth with very few toys allowed my imagination to soar among the winds. My doll play became times of joy and wonderful distraction, as comforting and lovely as the wild primroses that grew, as I grew in Taco Town in Eastern New Mexico.

Many moments during early evenings had me sneaking out of my room to journey with Barbies in hand across the street to play under the bleachers during a baseball game. I would settle my dolls beside me as I used the mud from the fresh rain to construct houses. Sometimes my dolls would experience spa baths as I played with them and soaked in the wonderful sounds of the game. My interactions with the dolls included first creating memorized scripts for my dolls, making them interact with each other through speech and behaviors within different "scenes" (short moments of play in which I would change the story/theme). Voicing for each doll mimicked my own personality and behaviors like written and verbal storytelling I routinely engaged in. The dolls talked with one another about their experiences through campfire stories and while gardening in the back of their dollhouse, and each scene involved me practicing talking and demonstrating my own habitus or ways of being and interacting.

As the years continued, doll play became an important part of my creative space. I found myself intrigued with a new doll genre/format: Holly Hobbie paper dolls.

Figure 9: Holly Hobbie Paper Dolls

I created lace bonnets and broom skirts from magazine pages and dressed and redressed my paper friends amidst creating adventure stories for them. Countryside escapades or tea parties quickly wove journal pages together as my paper muses multimodally extended my imagination from simple play to narrative writing. This narrative play continued far beyond the margins of my childhood and well into my adulthood as I created stories for my daughters based upon my childhood years of play.

Digital Bonnets: A Reprisal of Doll Play, Digitally. The Friends Forever doll, Alanis, ethnically represents a brown girl so this drew me in as a Latina who did not see herself represented in toys growing up. Alanis' key interest is technology and enjoys playing video games, building different kinds of technology, and hopes to become a computer engineer. Her interests and mine intertwine: I teach a technology course, write and publish on the uses of technology for storytelling, and find virtual identities and practices fascinating. So having the ability to digitalize my doll play as a child would have allowed me to create a digital Holly Hobbie or a new type of "paper" doll. My imagination and dreamworlds would have involved me in my room, iPad in one hand with a digital pen in the other to create my paper doll, fashioning digital bonnets with flowing prairie dresses (e.g., Figure 10), while intermittently typing out stories of romance and adventure.

Figure 10: Digital Bonnet drawn by Christina

Discussion

Dolls and other toys can have significant roles in facilitating discussions and fostering interest in various topics. At a mere glance what a teacher may hold in their hands is just a doll or a toy, but by utilizing it as a tool shared interests may be found to form relationships between classmates and adults in the school setting. Through this development, vocabulary and storytelling are exchanged. Classmates' ways of behaving in the world are reflected in their conversations. Individual interactions with dolls specifically encourage youth to consider how their identity is reflected on a doll, especially one that has an identified career. Dolls and other toys help form stories that encourage deeper curiosity but also to encourage more of a transactional relationship (Rosenblatt, 1969) between the doll (as text) and the student (as reader and interactor). Teachers should consider toys to engage students as new topics across subject areas are introduced for them to have a tangible item to view and manipulate.

Implications

In this section, we provide a re-storying of practices we imagine for each doll: a summary of each doll's scientific interests, each of our reasons for choosing the doll, and then practical ideas for uses within the classroom.

Re-storying Viera's Narrative

I chose the doll Viera because she loves crystals and gemstones, art, and being outdoors. I am also a nature lover, creative, and am fascinated with the Earth. I find geology to be one of the most interesting branches of science, so I related to Viera and would have probably chosen her as a kid. She also has bright pink hair and an outfit I could see myself wearing. As I have just demonstrated, students can also relate to the four Friends Forever Club dolls and explore science through playing with them in the classroom. I think these dolls could be used as a portal for young girls to get exposure to STEM.

1. Rotating stations- each doll gets its own hands-on activity for girls to travel. As the students travel from station to station, they will have the opportunity to explore Geology, Astronomy, Computer Science, and Marine Biology. At every station the girls will learn about these different branches of science through online research to specifically discover vocabulary associated with each career branch. They also will have the opportunity to embed STEAM vocabulary into doll play, as the dolls themselves in real life, becoming a scientist for the day. This would be an excellent way for young girls to explore their identity through doll play.
2. Rotating Stations (Geology)- At the Geology station, students will have a large tray filled with sand and different rocks, gemstones, and crystals hidden within. The students will use a shovel to dig through the sand and complete a scavenger hunt where they must find and then identify certain rocks, gemstones, and crystals, as objects, with laminated matching vocabulary terms hidden within the sand.
3. Rotating Stations (Astronomy)- At the Astronomy station, students will partake in a Virtual Reality (VR) experience that allows them to gaze into the sky as if they were using a telescope and identify the constellations in a similar scavenger hunt as they completed at the Geology station. As students locate constellations in the VR experience, they would also recreate each constellation onto a "Wanted" poster at the station. If there is no access to virtual reality technology, the same could be accomplished on a computer.

4. Rotating Stations (Computer Science)- At the Computer Science station, students will use computers or a tablet to code their own video game using *CodeMonkey*. *CodeMonkey* is a website created for kids to experiment with programming in a fun, accessible way. *CodeMonkey* provides different types of coding games to choose between, which allows each student to feel like they are all coding their own games. The exit ticket from this station will focus on a three-sentence reflection of one step they found was extremely helpful in the coding process.
5. Rotating Stations (Marine Biology)- At the Marine Biology station, students will use a Nintendo Switch to play a game called *Endless Ocean Luminous*. In this game, the student will be given the task of exploring the deep sea to discover different sea life as they scuba dive around the game's extensive map. Students will also be given a scavenger hunt checklist of sea life vocabulary to pronounce and find as they explore the game.

Re-storying Carina's Narrative

Carina provides a basis for a fun space-centered activity day for students in grades K-3. Activities for students may include creating a solar system model, building and launching rockets, space-problem solution activity, creating planets with clay, exploring the importance of space exploration, and a biography station to explore female space scientists.

1. Solar System Model: Provide children with paper to first draw a blueprint of the solar system they would like to create. In the drawing, have them label specific planets. Then provide students with paper (construction, poster, etc) to cut into planet shapes or Styrofoam balls, string, a yellow circle or ball. Have students color and cut out paper representations of planets. Help attach the planets to string and hang from a large circle representing the sun.
2. Building and Launching Rockets: Discuss the parts of a rocket through providing a poster diagram that highlights rocket vocabulary terms. Talk about how it launches into space. Do a choral reading of each term, with the teacher pronouncing each vocabulary term first and then students repeating aloud each term. Using cardboard tubes, have students decorate the tube to look like a rocket with markers, crayons, and construction paper. Take students outside and launch a rocket for students to observe.
3. Space-Problem Solution Activity: Discuss problems scientists have encountered with space missions. As a springboard for this activity, first do a read-aloud of the picture book *Hidden Figures* by Margot Lee Shetterly and have students pair up to do a turn-and-talk about challenges faced in the book. Emphasize the importance of teamwork and problem-solving skills. Provide each student with a printed-out double entry journal template along with a brief space-problem scenario. Have students write out the challenge(s) in the left column of the journal and possible solution(s) in the right column.
4. Clay Planets: Provide students with paper to create an Open Mind Portrait that will contain the drawing of their favorite planet (cover page) and 2-3 pages of unique features of their planet through doodles, words, phrases, and symbols. Encourage children to sculpt their own version of a planet, discussing the planet's unique features with one another.
5. The Importance of Space Exploration: First, provide students with an active listening guide to fill out while viewing a YouTube video. Show a YouTube video related to

space exploration, and as students watch the video, pause from time to time and guide them to respond to questions on the template. Have students contribute one by one written words and phrases on a shared Google slide as to what space is and why it is important for us to explore space.

6. Biography Station: Read a short excerpt from the choice of their favorite picture book related to space exploration, located in the station. Have students do a Tea Party at the station, using pre-cut sentences from the books to share and discuss with one another.

Re-storying Alanis' Narrative

I (Christina) am in the classroom but work with adult learners who will be future classroom teachers, so my interest in student engagement is related to what students can learn and use with their own future learners. Since I teach methods courses for elementary and secondary teacher candidates and focus on digital applications, as well as teach a Using Computers in Education course, the connection to the Alanis doll seemed to be an amazing fit.

Alanis provides an important artifactual connection to students' learning through technologies. This doll and the other Friendship Club dolls can be used with middle school students to foster writing and creativity.

1. Digital Story: Using the Alanis doll as an artifact for cross-curricular writing, have each student choose Alanis or another doll and create a digital story based upon the doll's scientific discipline. The story can be solely on the doll and their adventures or can be a critical story of the student's and doll's identities overlapping.
2. Fan Fiction Story: Work with students to have them create a Google Doc or Google Slides fan fiction blog using Alanis as a springboard figure to talk about their own future self, goals, and aspirations. Allow students to read and respond to their classmate's blogs.
3. Engineer Heroes: Have students research different types of computer engineering careers and focus on their favorite. Students create a Wanted Poster for themselves, which focuses on their career attributes and how these matter as a future engineer.
4. Girls Who Code: Using Alanis' background as a female computer engineer to discuss the topic of women who code. Connect students (high school and/or higher education) to free programming: https://girlswhocode.com/programs

Conclusion

Exploring how dolls help students identify with a topic or career is a subject we will continue to explore, especially in our own practices and classrooms on our campus at Indiana University Kokomo. We hope that our own stories, but especially the practical methods associated with each doll's background and their connections to STEM fields will help you to consider how doll play can be utilized in the classroom to invigorate students' learning and even more, spark play and conversations about students' interests and imaginations.

As educators seek to find new ways to build connections and deeper relationships with students, toys and dolls may be an innovative way to foster these, so observing the use of dolls to introduce and explore topics in classroom practices will be encouraged as work continues in our

professions. We plan on furthering our own teaching practice with higher education students to spark their ideas of how they might consider doll play in their own future classrooms.

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