Student Voices in the Digital Hubbub

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As critical educators, our goal is to support students in understanding their worlds—the nature of power and their possibilities for action—and working together to build more just and peaceful futures. In this chapter we argue that dialogic student voice, authentic to students' sense of self but also strategically seeking ways to be heard and understood, is central to these goals. Our society's increasing reliance on digital media and computational technologies has transformed our worlds, the working of power within them, and opportunities for student voice. We explore how interactive storytelling, a hybrid of prose writing and computer programming, can be used pedagogically to support critical computational literacies.

In the following sections, we look broadly at the relational and pedagogical possibilities of interactive storytelling. We first provide an introduction to a free open-source web application and programming language students used to write interactive stories, and then analyze a case study from a workshop which took place over two weeks in a high school's English and Sociology classes. As part of a broader design-based research project to develop tools and pedagogy for literacy-based computer science education, this case study applies a reader-response lens to analyze how one student developed voice through her interactive story. We focus on three pedagogical challenges particular to supporting student voice in digital literacy spaces: *authoring identities, channeling voices,* and *developing critical awareness*.

INTERACTIVE STORYTELLING

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The interactive stories we discuss in this chapter are single-player text-based games in which the player chooses paths through a nonlinear story. Interactive stories can model in-person or online discourse, allowing otherwise-ephemeral phenomena to be experienced, studied, and discussed. In previous school-based interactive fiction writing workshops (Proctor & Blikstein, 2019) students used interactive stories to model subtle uses of power such as flirting, persuasion, microaggressions, and ambivalence about self-disclosure or willingness to challenge social norms.

Rhetorical choices involved in writing interactive stories are complex. In addition to traditional literary rhetorical choices, authors script the player's interaction with the story. The author decides when to allow the player choices and the effect choices will have on story flow. By structuring choices in particular ways, authors can grant or withhold agency, force the player to become implicated in a story's action (for example as a witness or a perpetrator), allow the player to invest in her in-game identity, or induce alienation from the story's world.

To support writer's workshop-based pedagogy (Dorn & Soffos, 2001), Proctor and Blikstein (2019) worked with secondary students at several US schools to design and develop a web application called Unfold Studio which allows users to read and write interactive stories. In Unfold Studio, interactive stories are written using a programming language called Ink (Inkle, 2016), which was designed to feel as much like writing prose as possible. The narrative is divided into knots, containing anywhere from a phrase to several paragraphs of prose. Typically, a knot ends with several options to be presented to the player, where each choice causes the story to divert to another knot. For example, Figure 1 shows the beginning of a playthrough of "High

School Kickback," the student-authored story we analyze in this chapter. The unfolding story is on the right; its source code (always available to players) is on the left.

Figure 1: The beginning of a story playthrough on Unfold Studio

The first ten lines of code in Figure 1 illustrate the basics of Ink syntax. The first line (`-> First`) is a divert, instructing the story to continue at a knot called "First." This knot is defined starting on line 3 (`=== First ===`). When the story reaches "First," the player sees the text, "It's 9:30PM on a Saturday night. You get a snap [Snapchat message]. Jack is typing... ", and is then presented with two options. If the player clicks "Open it in two minutes," the story will divert to "Hey" (which is defined on line 12). If the player instead decides to wait an hour, the story also diverts to "Hey." The player would perceive a choice, but the story proceeds the same

way regardless of what she chooses. The Ink language contains additional syntax, but this is enough to follow the story presented here.

AUTHORING IDENTITIES

The broader theme of this book, student voice, has been an important concept in our analysis of critical pedagogy within interactive fiction, naming qualities of presence, power, and agency we seek to support in students (Cook-Sather, 2006). However, some calls for student voice are critiqued for implying that each student has a stable, authentic self, so that the teacher's role is encouraging students to share (Lensmire, 1998; Kamler, 2003). If we overemphasize sharing authentic experiences through writing, we risk creating inequities related to which experiences we value and which students feel safe sharing their experiences (Grumet, 1990). Instead, we understand identity to be something performed in social context, existing at the intersection of ideas we have about ourselves and possible selves made available by the social and cultural context (e.g. Holland, Lachicotte, Skinner, & Cain, 2001; Moje & Luke, 2009; Wertsch, 2009). This tension between how we see ourselves and who we can be in social context is particularly important in today's world of digital media, where we might be simultaneously performing different identities for family members in the same room, friends on a group text, and another public on Twitter. Because it is nonlinear, interactive fiction creates ambiguity useful for exploring these kinds of identities; there are many possible versions of any character or situation.

We focus on one story written within a high school classroom in order to discuss how pedagogy can support student voice. The story below was written by a female high school senior as part of a two-week writer's workshop led by one of the authors (Chris). The workshop, set in a

sociology class in an affluent northern California high school, focused on using interactive storytelling to explore sociological ideas described in the previous paragraph:

1. **Models of personhood**: In any social world, people inhabit models of personhood which define what kind of person they will be seen as and what they can do.

2. **Performativity**: Identities are dynamic, not static. We perform our identities, bounded by models of personhood, but possibly also redefining models of personhood.

After discussing these ideas, we explored them through optional story prompts such as "create an oppressive social world where the possibilities of speech are limited for the main character" and "Create a world where the main character subverts a model of personhood s/he is assigned." The story we analyze consists of 131 lines of code, not including blank lines. We focus on three excerpts to ground how this student builds voice, empathy, and a sense of agency in her reader. We focus primarily on talk turns, which are the text in knots and choices presented to the player. Names and other identifiable details have been changed. The full story can be played on Unfold Studio at https://research.unfold.studio/stories/1207.

High School Kickback (lines 1-36)

```
        -> First


        === First ===
        It's 9:30PM on a Saturday night. You get a snap. Jack is typing...
[5]     * Open it in two minutes.

            -> Hey
        * Wait an hour (because he took 59 minutes to respond to you).
```

```
                -> Hey


[10]    === Hey ===

        Want the addy?

        * Ya fasho

                -> Addy

        * Eh... idk (play hard to get)

[15]            -> Cmon

        * Nah, imma stay in for the night. The end!

                -> END



        === Addy ===

[20]    Slide in 15

                -> Clothes



        === Cmon ===

        C'mon I really wanna see u;)

[25]            -> Clothes



        === Clothes ===

        You open your closet and immediately regret saying you'd go out bc you

        have nothing to wear.

[30]    * Boyfriend jeans (bc girl, that's the only bf u can get), your dad's t-

        shirt, and white converse

                -> Uber

        * Black, deep-v bodysuit, two sizes too small jeans, black velvet choker,

        and those cute new booties you just bought

[35]            -> Uber
```

The story begins by setting the scene: "It's 9:30PM on a Saturday night" (line 4). The player gets a snap (Snapchat message) from Jack inviting her (we presume) to a party. Writing in second person, the author positions the player as someone having an experience and (her)self as someone who is controlling the experience. Figure 2 shows possible story flows in lines 1-36. The choices in this excerpt do not affect where the story goes; rather, they are about letting the player craft her in-game identity, particularly how she positions herself with respect to Jack. Jack apparently took a long time to write back; should you respond immediately (positioning yourself as available and interested, possibly vulnerable) or should you wait the same amount of time that he took to write back to you? Power is at stake here, in ways that will develop significantly later in the story.
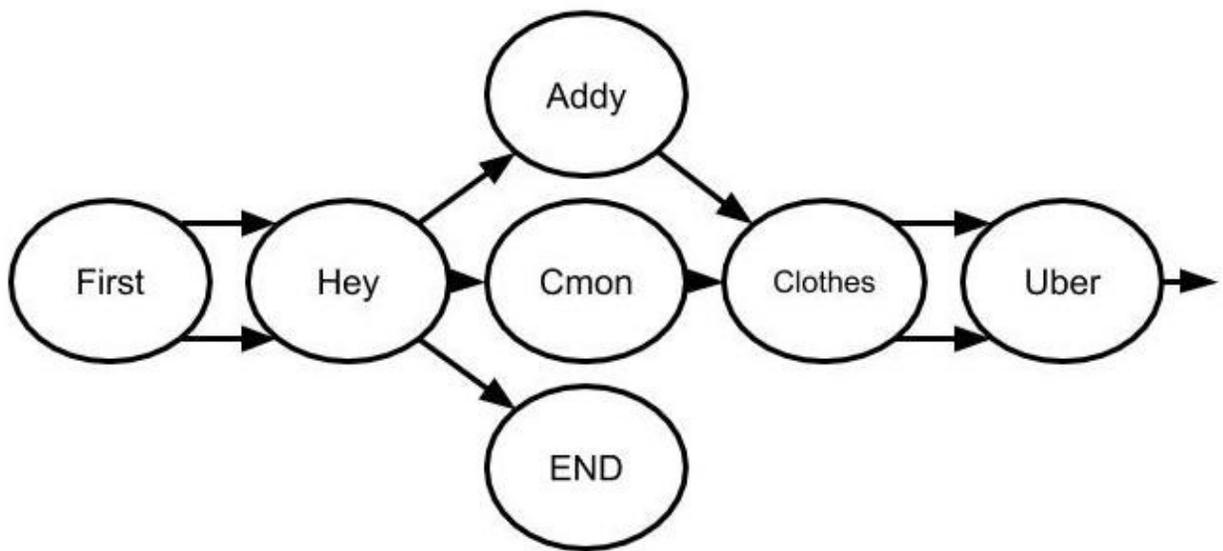

Figure 2: Story flow diagram for Kickback, lines 1-36.

After Jack offers to send the address of a party ("Want the addy?" (line 11)), the player again gets to choose enthusiasm, standoffishness, or to decline altogether. This third option immediately ends the story, though the player can immediately replay and make a more productive choice. Even though there is no real option to avoid going to the party, forcing the choice positions the player as having affirmatively chosen to attend, structurally echoing "fear of missing out" social pressure. The choices rejoin at "Clothes" (line 27), where the player chooses her self-presentation. Should you dress in "Boyfriend jeans,... your dad's t-shirt, and white converse"? Or "Black deep-v bodysuit, two sizes too small jeans, black velvet choker, and those cute new booties you just bought"?

The primary effect of interactivity in this excerpt is not to affect the outcome of events, but to allow the player to experience the internal thought process that accompanies external actions - actions that some readers (classmates) might not have realized were intentional acts of identity authorship. Within the context of a classroom writer's workshop, this dynamic can be extremely productive. It allows authors to represent vulnerable situations from multiple perspectives while preserving ambiguity about their relationship to lived experience. Players take active steps to build identities within the story, which potentially humanizes characters they encounter and offers a template for enacting similar empathy-building steps in real life.

CHANNELING VOICES

If we are thinking of identity as authored and performed in sociocultural context, then voice must be more than disclosure of a pre-existing identity. The words and actions with which we author our identities are not ours; they already have meanings and histories. So voice -

getting heard and understood - becomes a process of assembling identities from meanings around us, hopefully recognizing voices already present in words we use.

This idea of voice-as-dialogue is a feature of writing generally (Ivanič, 1998), but its workings are made explicit and visible in interactive storytelling. Most of the first excerpt of "High School Kickback" (lines 1-36, above) is told as the player's internal monologue. But in "Clothes" (line 28), the internal monologue begins to speak in (or ventriloquize) a judgmental external voice. If the player chooses to wear "Boyfriend jeans," a casual outfit, this voice interjects, "(bc girl, that's the only bf u can get)." Speaking in this voice implies accepting its logic: wearing boyfriend jeans (as opposed to the seductive alternative) means presenting yourself as non-sexualized and unavailable. Regardless of what the player chooses to wear, voicing such a self-aware description of these choices testifies to an understanding of what kinds of clothes might be worn to such a party and what they would signify. This fluency marks the author, character, and player's in-game identity as belonging to the community of party-goers. The author's weaving-together of voices intensifies in the second story excerpt.

High School Kickback (lines 37-70)

```
[37]  === Uber ===
      You think about it... Do you wanna drive or get a little crazy tn?
      * Drive yourself
[40]        -> Chill
      * Order an Uber
            -> Cray
```

```
=== Chill ===
```
[45]   John Mayer is bumping as you pull up to the func. You can't drink you

        dummy . You have a sad night because happiness is contingent on alcohol

        consumption. The end!

        -> END

[50]   `=== Cray ===`

        Javier is two minutes away. You get into the car and adjust your choker

                -> House

        `=== House ===`
[55]   You have finally arrived. Do you...

        * text Jack that you've arrived

                -> Less

        * walk in with confidence
[60]   -> More

        `=== Less ===`

        Jack comes outside... "hey, you're a little early." He leads you inside.

                -> People
[65]

        `=== More ===`

        You barge in the door and it's just Jack and some underclassmen boys

        sitting on the couch playing FIFA. They all stare at you.

                -> People

In "Uber'" (line 37), the player contemplates whether to "drive or get a little crazy tn," referring to drinking or drugs. Choosing to drive is a dead end: "You can't drink you dummy. You have a sad night because happiness is contingent on alcohol consumption. The end!" (lines 45-47). Which voices are speaking here? The narrating voice separates itself from the player's inner thoughts, chiding the player for a mistake. It is as if the narrator were ending the story to go to the party, leaving the player behind. Is there also an ironic overtone mocking the claim that "happiness is contingent on alcohol consumption?" The prominence of drinking and driving as a non-option can be read as addressed to the school norms generally and the teacher specifically, positioning the author as a good student having the courage to address real issues.

What does it mean for a high school senior to talk about these topics in her sociology class? It puts her at risk of school-based discipline while also possibly allowing her to share important personal experiences and bolster her social standing as a risk-taker. She can shield herself from possible disciplinary consequences related to drinking by harnessing the classroom's legitimization of lived experience and possibly also existing expectations about the privileged status of self-disclosure in a creative writing context. At the same time, the narrating voice clearly presumes that drinking and driving is not an option. For the "official" classroom community - one of this story's audiences - this is a laudable stance. It would be possible to bring up similar topics with traditional creative writing, but there is more space within interactive storytelling to call up voices without necessarily attaching them to the author's in-classroom identity.

DEVELOPING CRITICAL AWARENESS

Ultimately, the goal of critical literacy pedagogy is to help students understand the world around them and their place in it so they can participate in building shared futures. The final excerpt from the student's story shows how interactive storytelling can support this goal. As the story unfolds, the character—but also possibly the player—builds an identity in a process scripted by the author. Playing and replaying a story can be seen as guided practice for developing the same understandings in real life. In the final excerpt below, the player is touched inappropriately by a boy at the party, and must confront both the uses of power that makes the violation possible and thinking through possible responses.

High School Kickback (lines 71-107)

```
[71]  === People ===
      People begin to file in and it becomes v lit. Colin, the boy you've been

      friends with forever comes up to you to chat. He's very drunk and begins
      to grab your ass.
[75]  * You let it slide. He's like your brother and it's happened before and
      you've mentioned something, but nothing's changed.
            -> Notice
      * You've mentioned this to him before and he still hasn't done anything
      to change. You're annoyed so you go off at him and make a scene. You
head
[80]  over to the couch to cool off.
            -> Comfort
```

```
=== Notice ===

Other guys notice how he's acting towards you and realize they can do

the

[85]  same. Even though you know it won't escalate to anything more if you

don't want it to, it's pretty disgusting. You move to the couch to try

to

get away.

        -> Comfort

[90]


=== Comfort ===

Steph comes over to join you on the couch. She's being super nice to you

and you have a pleasant conversation. She notices that you're still

super

tense from before so she offers you to hit this joint.

[95]  * Hit it and trust this girl. It's probably just weed.

        -> Done

* Ask her what's in it.

        -> Answer

* Say thanks, but no thanks.

[100]      -> Explore


=== Answer ===

She says it's Angel Dust. You're not quite sure what that is...

* You decide to smoke it anyways. F*** it!

[105]      -> Done

* Eh, it's probably best if you don't.
```

```
                    -> Explore
```

The main conflict of the story takes place in "People" (line 71), as Colin, an intoxicated friend, touches the player inappropriately. The player must make a choice. Should she "let it slide", voicing excuses that Colin is "like a brother" and, pragmatically, that previous attempts to get him to stop have been ineffective? Or should she "go off at him and make a scene?" Each alternative contemplates authoring an identity, partly voicing an internal justification for the choice and partly imagining its social reception.

The significance of this scene, and of the story, depends on the player's agency in a way that is distinct from standard narrative writing. What choices are available to the player, and will they have any impact on the outcome? The answer is ambivalent. One the one hand, saying nothing allows other boys to construe the inaction as permissiveness: "Other guys notice how he's acting towards you and realize they can do the same. Even though you know it won't escalate to anything more if you don't want it to, it's pretty disgusting" (lines 84-86). On the other hand, the player's choice does not affect how the story ends. Both choices lead to "Comfort" (line 91), a de-escalation of the immediate situation but without any structural change. Importantly, these meanings are shaped by authorial choices. It could be that denying a player agency within a story contributes to a transformative experience for real-world readers. See Proctor and Blikstein (2019) for an example of how a student used this effect to contest her teachers' racist interpretation of a joke.

Several pedagogical strategies shaped the conditions which made this storytelling possible. First, the writer's workshop format centered student reading and writing, enabled by

Unfold Studio's affordances for writing, sharing, playing, and remixing stories. Within this space, we observed (and actively encouraged) diverse literacy practices. Some students spent hours playing stories before deciding what they wanted to write about. Some students wrote in pairs. Some sat with groups of friends playing and discussing their stories, or asked for feedback from specific peers. Because stories were published to the web, some students shared their stories with people beyond the classroom.

Within this space, the teachers cultivated and reinforced norms, invited students to mini-lessons on particular topics (for example, more advanced programming), and met with students individually. It was particularly helpful to explicitly discuss sociological ideas first and to explore their dynamics in concrete everyday situations. For example, there was an extended discussion of various ways parents sometimes impose identities on their children. These familiar experiences provided footing to consider how they were affected by formations such as gender, sexuality, race, and social class. Many students wrote about how they developed stories as illustrations of ideas that came up in discussion. The distance between authors and voices they brought together in stories made it easier to model and share personal experiences. The availability and replayability of stories made them potentially transformative experiences for their players.

CONCLUSION

Youth today are growing up in complex literacy spaces in which communication is regularly mediated by multi-layered digital media. We are more connected than ever, but we have very little control over meaning-making processes at work. Instagram, Snapchat, Twitter,

and the like have full control over how (and whether) our content is presented, to whom, and in what context. The issues we have addressed in this chapter, authoring identities, channeling voices, and developing critical awareness, are more challenging and more important in the landscape of digital media. We have found that interactive storytelling can open productive spaces for modeling, understanding, sharing and acting on digitally-mediated experiences. We invite you to join us in exploring the possibilities of supporting student voice through interactive storytelling.

REFLECTION QUESTIONS

In your worlds (e.g. work, family, social media), how do you author different identities?

How does social media change the way we channel voices? For example, people often speak by re-contextualizing content created by others.

As our literacies shift from print to digital, what opportunities and challenges exist for critical understanding and social change?

OTHER RECOMMENDED RESOURCES

Unfold Studio, free open-source web application (https://unfold.studio)

Unfold Studio documentation and curriculum, including a full curriculum unit (http://docs.unfold.studio)

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