Routledge
Taylor & Francis Group

Creating cartoons as representation: visual narratives of college students with learning disabilities

David J. Connor*

Hunter College, City University of New York, New York, USA

Students with learning disabilities (LD) are the largest sub-group of all students with disabilities attending college in the United States. However, due to the multiple difficulties involved in transitioning from school to college, many do not succeed during their first year. This article chronicles ways in which three students with LD negotiate academic, social, and personal demands of college. The author-artist utilizes cartoons drawn to represent meaningful episodes within student experiences. By combining cartoons with personal narratives, participant testimonies reveal powerful ways in which students with LD strategize and self-advocate in order to survive their transition onto college. After highlighting the strengths and limitations of this approach, a case is made for the potential value of using cartoons for education research.

Das Erarbeiten von Cartoons als Beispiel: Sehberichte von Universitätsstudenten mit Lernbehinderungen

Studenten mit Lernbehinderungen (LD) sind die größte Untergruppe aller Studenten mit Behinderungen an den Universitäten der Vereinigten Staaten. Jedoch auch wegen der vielfachen Schwierigkeiten, die beim Wechseln von der Schule zur Universität überwunden werden müssen, sind viele während ihres ersten Jahres nicht erfolgreich. Dieser Artikel zeigt Wege auf, wie drei Studenten mit Lernbehinderungen akademische, soziale und persönliche Anforderungen mit der Universität aushandeln. Der Autor / Künstler verwendet Cartoons, die gezeichnet wurden, um bedeutungsvolle Episoden innerhalb von Studentenerfahrungen darzustellen. Durch die Kombination von Cartoons mit persönlichen Berichten offenbaren Teilnehmerzeugnisse starke Wege, welche Strategien Studenten mit Lernschwierigkeiten entwickeln und selbst beurteilen, um ihren Übergang auf die Universität zu "überleben". Nach dem Herausarbeiten der Vorteile und auch der Einschränkungen dieses Ansatzes werden Argumente für den potenziellen Wert gesammelt, Cartoons für die Ausbildungsforschung zu verwenden.

La création de bandes dessinées comme forme de représentation: les récits visuels d'étudiants de 1er cycle ayant des difficultés d'apprentissage

Les étudiants affectés par des difficultés d'apprentissage constituent le sous-groupe le plus important de tous les étudiants handicapés inscrits dans un cursus de premier cycle aux Etats Unis. Cependant du fait des difficultés multiples qu'entraîne la transition du secondaire à l'université, beaucoup échouent au

*Email: dconnor@hunter.cuny.edu

cours de leur première année. Cet article relate de quelles façons trois étudiants ayant ces difficultés d'apprentissage abordent les exigences académiques sociales et personnelles de l'enseignement supérieur. L'auteur-artiste utilise des bandes dessinées représentant des épisodes significatifs vécus par l'étudiant. En associant ces bandes dessinées avec des récits personnels, les témoignages des participants font apparaître avec quelle force les étudiants ayant ces difficultés élaborent des stratégies et se font leurs propres avocats pour survivre à la transition vers les études supérieures. Après avoir souligné les forces et les limites de cette approche, l'auteur plaide pour l'atout que peut constituer l'usage des bandes dessinées pour la recherche en éducation.

La creación de historietas como forma de representación: los relatos visuales de estudiantes del primer ciclo universitario con dificultades de aprendizaje

Los alumnos con discapacidades de aprendizaje (DA) constituyen el sub-grupo más importante de todos los alumnos con discapacidades matriculados en el primer ciclo de universidades en los Estados Unidos. El problema es que, debido a las numerosas dificultades que conlleva la transición del colegio a la universidad, hay un alto índice de fracasos en el primer año. Este artículo describe de que manera tres alumnos con DA sortean las exigencias académicas, sociales y personales de la enseñanza superior. El autor/artista utiliza historietas dibujadas para representar episodios significativos asociados con las vivencias de los alumnos. A través de la asociación de esas historietas con relatos personales, los testimonios de los participantes revelan con que fuerza los alumnos con DA elaboran estrategias y auto-defensas para sobrevivir a su transición hacia la universidad. Después de destacar las fuerzas y limitaciones de esa metodología, el autor aboga por las potencialidades positivas del uso de historietas para la investigación en educación.

Keywords: qualitative research; disability studies; learning difficulties; cartoons; college

Introduction

The purpose of this article is to expand qualitative inquiry in the field of education to include visual representation in the form of cartoons created by the researcher. Although cartoons exist in education research, it is usually in the form of children's work (Reid & Button, 1995), and while drawings as data are not uncommon, they are still often framed within quantitative conceptions of reliability and validity (Haney, Russell, & Bebell, 2004). To date, I have not seen researcher cartoons as representational data within education research, except for other projects I have helped to develop (Connor, Valle, & Ferri, 2005).

The reasons for creating cartoons to represent participants in a study are manifold. First, while ostensibly appearing playful, political cartoons are serious in intent. Similarly, the cartoons in this research emphasize important episodes in the lives of participants who share personal knowledge of their learning disability (LD). In doing so, they reveal an epistemological awareness that oftentimes significantly contrasts with traditional, institutional accounts of disability. Second, because a strong visual component to written and/or auditory information is provided, a cartoon effectively conveys meaning(s) in a concentrated, highly economic manner, challenging the largely unquestioned hegemony of "words only" (Wolfe, 2001). Third, a bold, simple visual "text" represents information that invites (perhaps even challenges) the viewer to participate in the co-construction of meaning. Fourth, visual representations accommodate individuals who have difficulty in quickly processing large tracts of

written text or dialogue. All four reasons interlock to provide multiple possibilities within the use of cartoons. Simply stated, I believe combining visual and narrative forms has multiple purposes, yet all purposes share the intent of creating a powerful impression for the reader or audience member.

Background: college students with learning disabilities

Within the population of *all* students with disabilities attending college nationwide, students with LD number approximately one half, by far making them the largest subgroup (Henderson, 1999). Although the numbers are positive signs about progress made by students with LD in terms of advanced learning, this development is counterbalanced by higher drop out statistics and lower "on-time" graduation rates for students with LD in comparison to their non-LD counterparts (Gretzel, Stodden, & Briel, 2001). During the first year of college, students with LD often elect to "go it alone" without registering for support services (Hadley, 2007). The temptation to blend in and steer clear of stigmatization is too great, and a telling indicator of how difficult it is to be "openly" learning disabled (Lee & Jackson, 1992; Mooney & Cole, 2000). As a result of this decision, numerous students fail in one aspect or another of their course of study by the time they register for support (Joffe, 2005). Therefore the question this research addresses is: in what ways do students with LD successfully negotiate the academic, social, and personal realms of college during their first year?

Theoretical framework

This research adheres to the tenets of Disability Studies in Education (DSE). It contextualizes disability in political and social spheres through contrasting medical, scientific, psychological understandings with social and experiential understandings of disability. Broadly speaking, the research privileges the interests, agendas, and voices of people labeled disabled, assuming their competence and rejecting deficit models of disability. Furthermore, it recognizes the embodied/aesthetic experiences of people whose lives/selves are made meaningful as disabled, and troubles school and societal discourses that position such experiences as "othered" to an assumed idea of normalcy (Connor et al., 2008).

DSE values the power of qualitative inquiry in providing alternative epistemological, ontological, and methodological choices to the positivist-oriented field of special education. Previously, in challenging the prevailing orthodoxy in the field of special education, qualitative methods were often rejected, even derided (Gallagher, Heshusius, Iano, & Skric, 2004). However, recently the fields of special education and DSE have been encouraged by scholars to cull from a variety of qualitative options, depending upon their suitability in relation to the research question posed (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005). Using arts-based methodologies in DSE is relatively new, yet it builds upon a tradition of using arts-based methodologies within Disability Studies in general known as "rehabilitating representation" (Snyder, Brueggemann, & Garland-Thomson, 2002). Indeed, several scholars within DSE have been influenced by the work of disability studies researchers and artists working within the humanities (Broderick & Ne'eman, 2008; Ferri, 2008). Like Ware (2008), who believes that "aesthetic, political, and cultural concerns [can be] conveyed through an interdisciplinary lens, shared by artists and scholar

activists" (p. 563), I seek to synthesize my own professional interests, scholarship, and preference for visual format in imagining ways research can be created and presented.

Methodology

DSE recognizes and privileges the knowledge derived from the lived experiences of people with disabilities. Whenever possible, it adheres to an emancipatory stance, meaning researchers work with participants as co-researchers ("participant-researchers" rather than "subjects"). Within this study, three college level students who self-identified as having a learning disability each participated in three separate interviews for 60–75 minutes using a semi-structured format. All interviews were transcribed and shared with participants for accuracy. Additional data was gathered in the form of observation notes, methodological notes, theoretical notes, and personal notes. Artifacts that participants wished to share, such as transcripts, awards, books, and so on, were also included as data.

In order to create cartoons I analyzed transcripts with view to finding instances in which: participants shared reflections on their lives, recalled specific instances where they came to know and understand their LD; and decided how to "manage" it without inhibiting their success at college. Connelly and Clandinin (1990) claim that "people by nature lead storied lives and tell stories of those lives, whereas narrative researchers describe such lives, collect and tell stories of them, and write narratives of experience" (p. 2). By crafting episodic narrative accounts that highlight how students with LD succeed in college, I examine their "everyday" interactions, compatible with Fairbanks' (1996) view of narrative research as having the propensity "to explore or explain that significance of what previously have been considered ordinary events and to raise these events to the exceptional" (p. 236).

Creating/staging data

In representing participants, I envisioned seven images based upon episodes within personal narratives that conveyed self-realizations about academics, social, and personal demands placed upon students. The number seven was chosen as it represents the amount of discrete pieces of information that "average" individuals can hold in their active working memory (Levine, 1994). Working within this parameter, I sought to maximize the information bytes a reader or viewer could process and simultaneously hold in their memory, thereby providing the opportunity to synthesize the knowledge into a more three dimensional, complex, holistic portrayal. The images representing each participant were arranged sequentially. All were informed by a number of quotations that spanned all three transcripts of the individual. To ensure confidentiality, each participant was then created as a character that did not physically reflect his or her actual resemblance. Images consisted of simple black lines on a white background with some block color in black.

Once completed, I sought to find out to what degree the participants thought about the accuracy of the cartoons and as a general sense of representation (see Table 1 for overview). To do this I first generated a brief statement to accompany each cartoon, describing why I was motivated to create that particular image. I then coupled every cartoon with the thematic group of quotations (between one to two pages, single spaced) that had inspired it, all gathered from the manuscripts of each participant. These particular constellations of quotations were chosen as I believed they provided

Table 1.   Overview of checking for meaning.

Creation of cartoons
  1. Data from transcripts, conversations, documents
  2. Clustered into themes (academic, social, personal)
  3. Cartoon representation created based on specific episodes or recurring themes

Verification with participants
  4. Provision to participants of:
      (a) cartoon;
      (b) researcher statement justifying cartoon;
      (c) the constellation of quotations from which the cartoon emerged
  5. Participants response in writing to the following prompts:
      (a) How accurate is this a depiction of your experience? Or how close does it
           approximate it?
      (b) Do you have any additional thoughts or comments? For example, what does this
           image make you think of?
  6. Responses analyzed by researcher

insights and partial answers to the research question, illuminating ways in which students successfully negotiated academic, social, and emotional realms of college life. The quotations also provided participants with evidence of my choices in how I was coming to understand their lived experiences, and how I wished to represent them. Participants were then asked to consider (1) How accurate is this a depiction of your experience? Or how close does it approximate it? (2) Do you have any additional thoughts or comments, e.g. what does the image make you think of? Finally, each person was asked to provide a written response about each image, about a paragraph in length. This allowed me to ascertain to what degree we agreed in accuracy of representation, and become aware of the instances where we differed.

Findings

In the following sections, I sample visual representations from the narratives of three participants: Amber, David, and Mary, ages 19, 20, and 40 respectively (see Figure 1). All participants have been given pseudonyms to ensure anonymity. Of equal
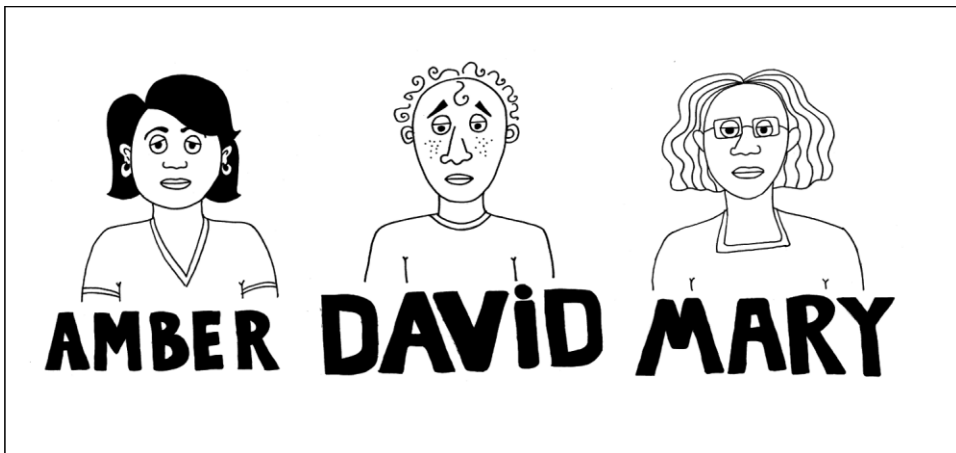

Figure 1.   Representation of participants.

importance, specific visual images were crafted that do not resemble any likeness of or physical characteristics of participants.

Before considering examples of how participants negotiated the academic, social, and personal realms of college, given the nature of the research, it is worth taking a moment to consider how they have come to know their own learning disabilities.

Personal understandings of learning disabilities

In sharing the image of *Experiencing LD* (Figure 2), I wrote to Amber: "I was interested in the fact that you were a competent student, but had areas that posed a real challenge to you that non-LD people take for granted, e.g. names and dates in history, visualization, and coordination. I feel these examples can help explain LD to people in very tangible ways." For this image, I was guided by Amber's revelation that when she took ballet, she became mixed up when asked to look at her own reflection and follow directions. An instructor shared about her own spatial cognitive issues, and this struck a chord with Amber. "She told me she used to dance," Amber said, "I was telling her when sometimes I looked in the mirror, I get confused. She said that, yeah, she had done that as well. It happened to her."

Amber's response was:

> It is accurate. It is hard for me to picture images. I need to see it on paper. I have trouble with shapes and spatial issues. I can't absorb a lot of information at once, especially
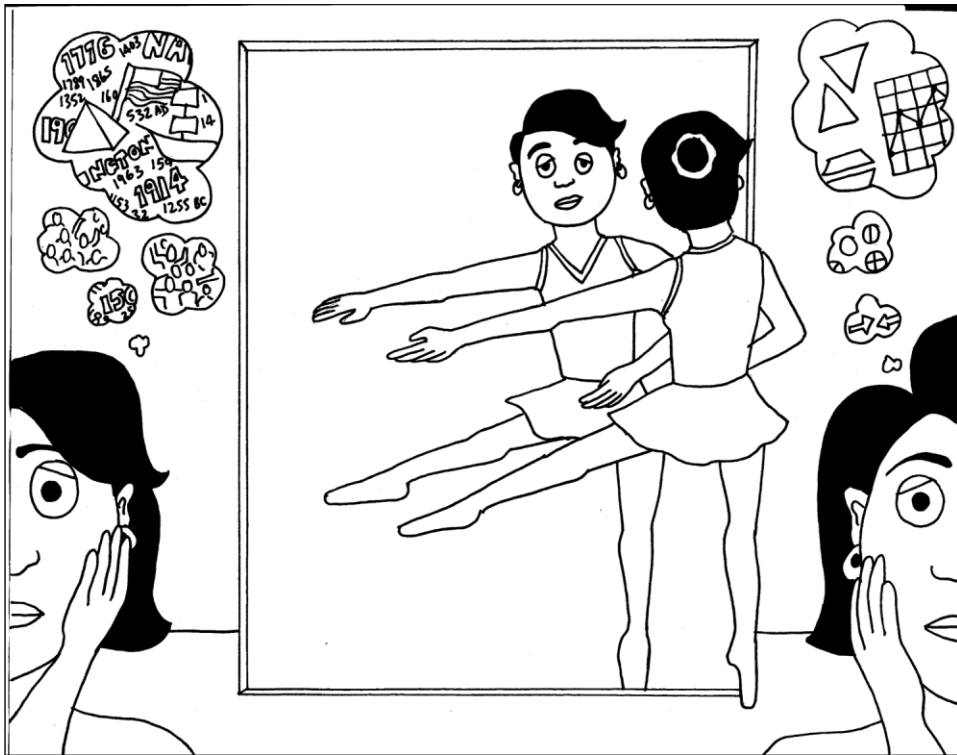

Figure 2.   Experiencing LD (Amber).

history, a subject I don't even like. [The image is of] a confused person dealing with a lot of things she can't handle.

When discussing *Asperger spiked wall of death* (Figure 3) with David, I wrote, "This image that you described conveys the surrealness of Asperger, the contradictions, absurdities, unsure understanding of 'reality' … you provide clear and powerful descriptions that help people unfamiliar with Asperger Syndrome come to understand it more." The genesis of the image actually came from a powerful diatribe unleashed by David, where he described:

> imagine being put in a room and you see a spiked wall of death, a super villain's wall of death. You have a blindfold put on you and spun around and told "Run for your life." Now imagine being faced this way, you might run straight into the wall of death for all you know. Now, that's roughly what it's like being an Aspie. You go in, you know that there's some risks involved and there's also the possibility of a good outcome … okay, yeah, if you run away from the spiked wall of death you get a nacho and a pudding-cake (I don't even know what a pudding cake would consist of, but it sounds tasty). Now, for the Aspie, if you don't know where you are you're blind.

David's response to the cartoon indicated that it was largely accurate, while he did offer ways to further enhance the drawing by exerting arms straight out (they are meant to be, but can be perceived as being crossed), and emphasizing time. When I
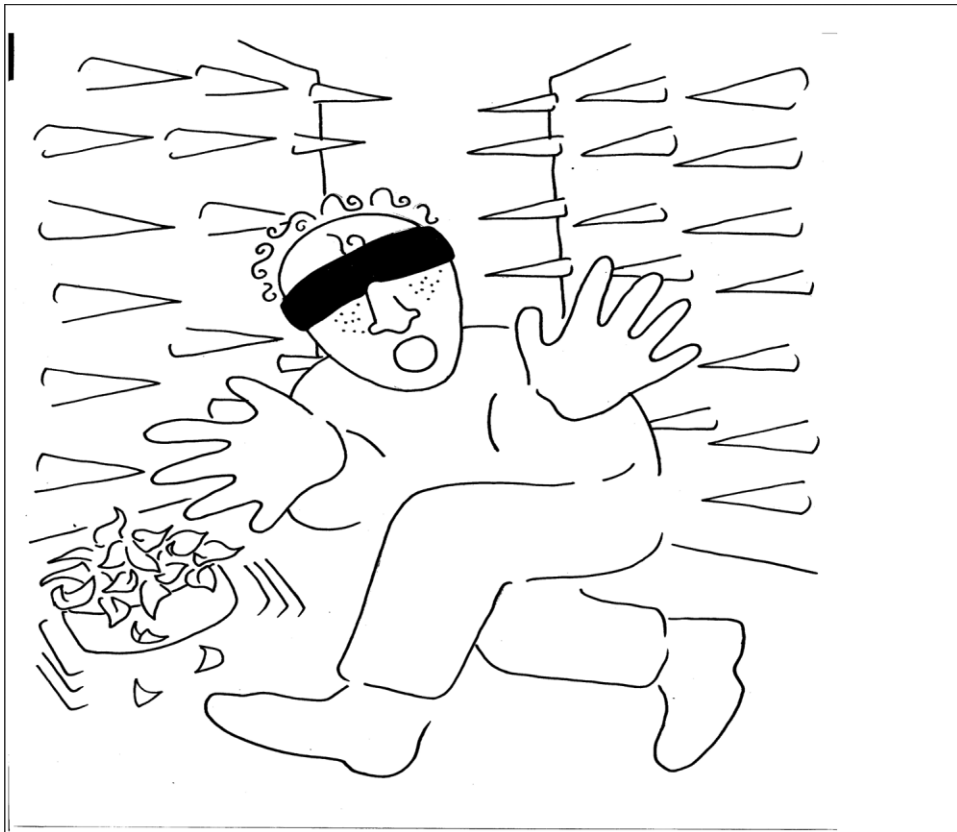

Figure 3.   Asperger spiked wall of death (Daniel).

asked him to clarify, he stated that it should feature "people with watches," as people "have no time" to support, or help, or engage with him.

In contemplating Mary's context of LD, *Falling through the cracks* (Figure 4), I shared that "I drew it because you didn't receive any help throughout your years in school, and didn't realize that you had some significant learning problems until your mid 20s. This was suggested to you by a sponsor [from an addiction support group]." Here, the visual choice stemmed from Mary's allusions to "the worst years of my life, really," where:

Figure 4.   Falling through the cracks (Mary).

> Everything was about doing for others, in a negative way. Today my life is how to be of service, how to help other people, but I've got to help myself first. And then by helping other people, I feel good about me and I grow.

She responds:

> This picture represents how I escaped the learning process. I had learning problems, but did not know it. I just thought I was dumb and could never succeed. I escaped the system by hiding. At the time, I was glad to be overlooked and not found out. I wanted school to just go away. Now that I look back on this, I wish I didn't fall through the cracks. I wish I had had support from family, tutors, et cetera.

Clearly, Mary's learning needs were not detected as she scraped by in school with haphazard support from friends, probably being perceived as an unremarkable "low average" student.

In brief, all three participants have diverse abilities and areas in which they struggle. Whether it is Amber's attention problems, David's social misunderstandings, or Mary's need for a slower, repetitive pace, all of them have managed to survive the vagaries of transitioning into college by negotiating academic, social, and personal demands placed upon them.

Academic demands

As mentioned in the introduction, the academic challenges of college can be easily underestimated and then mismanaged by all students, but perhaps especially those with LD. For Amber, in *Four ways of self-advocating/supporting/managing* (Figure 5), I conveyed, "You are a strong self advocate, you manage time, access services (e.g. additional time), prepare via study devices (cards), and reserve the right to choose if you take medication or not (based on contextual factors)."

The image is fairly self-explanatory, and is designed to bring together ways in which self-advocacy and self-management share the same goal and therefore reinforce one another. In response, Amber comments, "I am very assertive and responsible. Always have been. I have done all of those things – meeting with teachers, seeking help, flashcards … in order to succeed and help myself." From the moment she entered college, Amber sought information and assistance from the Office of Support Services for Students with Disabilities. She states matter of factly, "[I] asked them what I needed to do, because I don't know how else they'd find out."

For David, an individual with strong academic abilities, the demands of studying were inconsequential in comparison to the social demands involving student interactions, including his daily living situation in the dorms (see Figure 6). I explained, "The dorm experiences were traumatic for you. At first, you did not understand the behaviors and norms. A sense of isolation intensified as you experienced social ostracism. You took some satisfaction and comfort of being an academically high scoring student."

The image on the left hand side of Figure 6 depicts David eating his ice cream alone after having provided his roommates with a treat. "It's pretty accurate," he remarks, dryly adding, "Although it looks like hoarding." For the middle (top) image, where David stands apart from students' "partying," he writes, "I look guilty … I wouldn't even be there. I only went to two [parties]. I didn't drink." In the bottom image, David stands at the elevator, with students silently turning away from him to
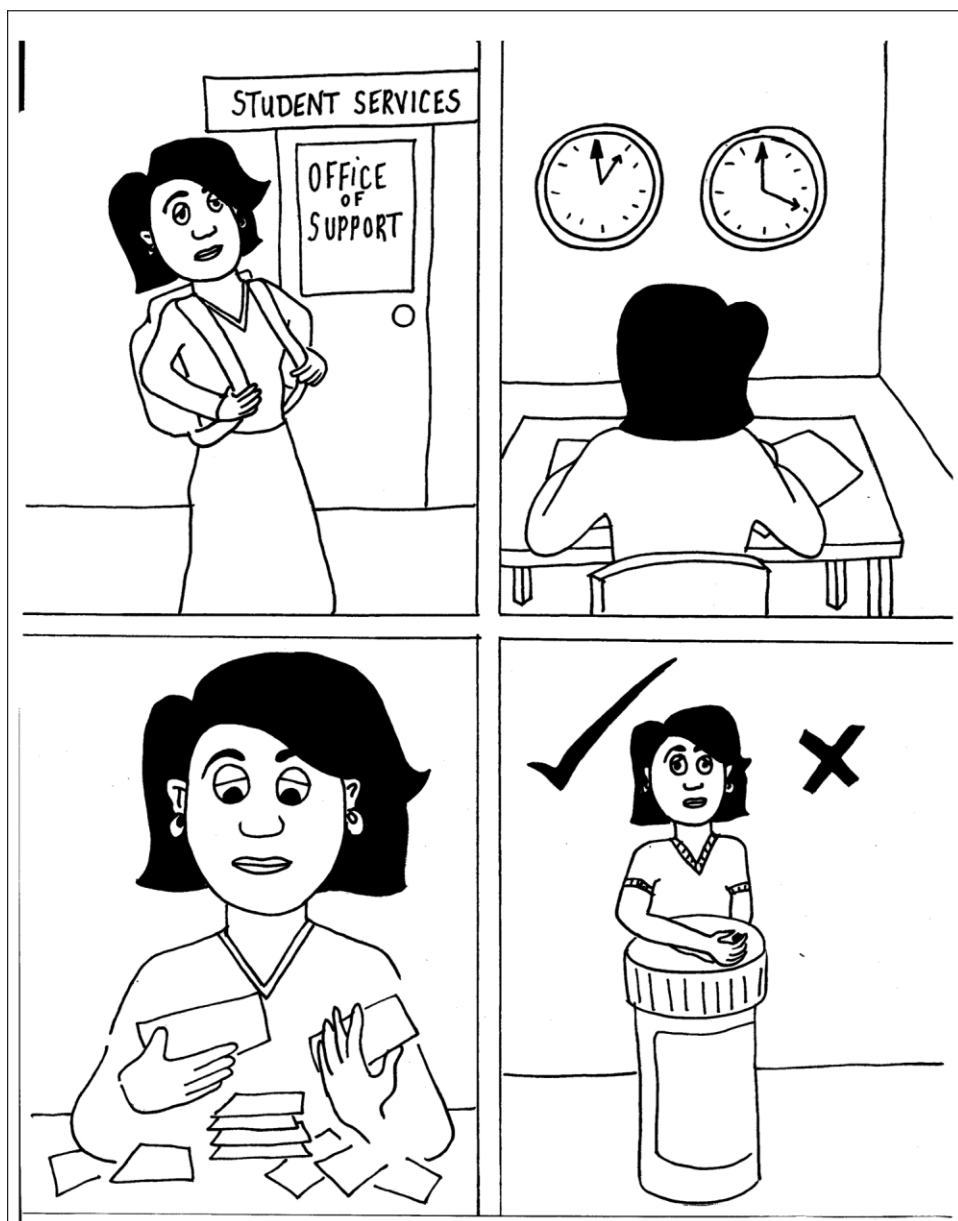
Figure 5.   Four ways of self-advocating/supporting/managing (Amber).

take the stairs rather than be in close proximity. It needs "more distance to get across the point of avoiding me," he suggests. Finally, he sits alone in his room with a wall covered in his "grade A" papers. He "really likes" this image, calling it "perfect," a mediation on his academic trophies.

In contemplating *Four ways of self support* (see Figure 7), I explained to Mary, "It shows the multiple, ongoing approaches you take – revealing a great deal of coordination, determination, and self-discipline." What struck me about Mary is a complete dedication to her studies. So far she has taken over 10 years to reach approximately

Figure 6.   Dorm experiences/academics (David).

the midpoint point in her baccalaureate degree, and is willing to spend another 10 to graduate. Mary's strategy has been to take one course a semester, thereby maintaining a 3.97 GPA. She notes, "I have to go through so much self-care to go through a couple of hours of school work. I get so tired, I have to take a break. It's very frustrating, it really is emotionally painful."

   Mary responds that the first and second drawings are:

> very accurate because the first one is of me in the writing center by myself and the other is of me with my tutor. I often go into an empty classroom with my tutor or a study room in the library because I am very noise sensitive and cannot concentrate. The picture of me listening and reading a book on CD is not how I do it yet. I usually just listen while I am cooking or cleaning my apartment. I need to make time to sit down and read the book while listening to the CD. I have not listened to many books on tape for course work. I usually listen to books on tape for my personal enjoyment. The last drawing is my biggest challenge. REST is my key to everything, health, sound mind, energy, peace.

In addition to these verifications, Mary comments that, "Looking at these four drawings makes me feel good." She continues, "It shows me how dedicated I am to my commitment for a better life. I am grateful to the writing center and Library for the Blind and Dyslexic for audio books."

   All three participants strategized to succeed in academics. For Amber, it was to matter-of-factly avail herself to services provided. Although Maria also does this, her journey through college is much longer as she patiently takes a step-by-step,

Figure 7.   Four ways of self support (Mary).

one-course-at-a-time approach. In contrast, David, while displaying his academic prowess by placing his all A grade papers on his dorm bedroom wall, inadvertently alienates his peers, thereby intensifying their rejection of him.

Social expectations

Portrayals of college life range from fraternity initiations and binge drinking to joining clubs based on shared interests and other social opportunities. All three participants

spoke of difficulties in assimilation to college life. In *College as a lonely place* (Figure 8), Amber focuses on the pressures of socializing within a perpetually teeming environment of over 20,000 students. My accompanying comment was, "You seemed disappointed, even a little sad that [college's] atmosphere of thousands of students rushing from class to class (and living with your family) had not created the opportunity for more meaningful friendships." In the image, she stands still and solitary in a sea of people rushing hither and thither.

Figure 8.   College as a lonely place (Amber).

Amber was quick to respond, "It's true that [the college] has no community whatsoever," adding, "I never enjoyed my time here, except for the first year when I actually had friends … This image is exactly what [the college] is like." She continues, "I do see groups of friends together and get a little jealous, but overall I'm sure most people feel the way I do … friendless, without a solid group to hang out with."

For David's *Marked by a bootprint* (see Figure 9), I wrote, "You feel marked, stigmatized. The experience has been painful and you carry it with you, as if written on your face." When David was asked to leave the dorms, he admitted that "to some extent it was a bit of a relief," yet also admits, "I didn't want to be imprinted with the Aspie label after the dorms. It's a bit like the print of a boot left on your face. Once the big bruises start to rise, it becomes obvious, a little hard to deny."

David approved of the cartoon, but felt it could be stronger. "I think the image needs bruises … there should be boots stomping around it, to get the point across." His sense of being beaten down in college, particularly in the dorm environment, was pervasive during all of our discussions.

In *Wheel of addiction* (Figure 10), I shared with Mary, "Much of your life story returns to the previous addictions – you have had many. However, from facing those addictions you have gained strength and knowledge that have helped you succeed. You have used some of the practices from these programs to help you keep focused and disciplined on your studies." The image coalesces around Mary's self-described addictive personality, and the cycles she described of claiming control and then losing it, before ultimately securing it.

Mary comments:

This is picture is accurate except for the pills. I was not a pill popper. I used cocaine. I was addicted to drugs and alcohol for 4.5 years, cigarettes for 14 and food since I am 12 years old. Today I only struggle with my food addiction, but if I am taking care of myself physically, spiritually and emotionally, the food does not call me.

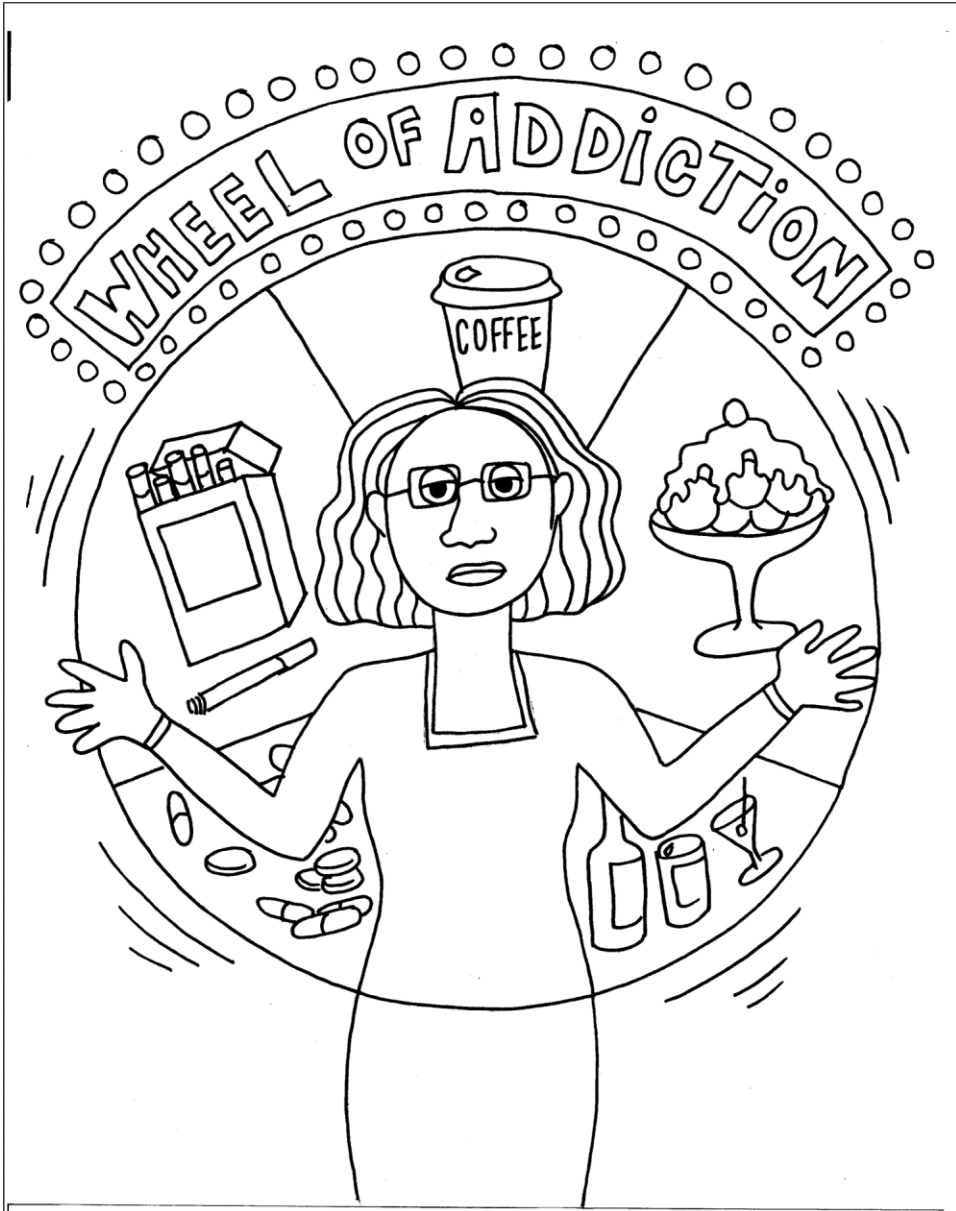Figure 9.   Marked by a bootprint (David).

Figure 10.   Wheel of addiction (Mary).

She further comments, "This image is a good reminder of where I come from. It makes me grateful for all that I have in my life and everything that I have accomplished." Mary is *always* mindful of from where she came, stating, "If I were to act out with these substances, my life would be ruined. I would loose everything I have been working so hard for such as: creating a home and healthy life style, education, and relationships with people."

For Amber and David, the college life leaves them feeling disconnected, alienated from fellow students despite being surrounded by them. The former is highly selective,

and unimpressed by the behaviors exhibited by many of her peers; the latter is unable to "read" and "decode" social interactions, inadvertently annoying classmates and dormmates. Mary, on the other hand, strategically minimizes friendships at college, claiming that they potentially get in the way of her educational goals.

Personal realm

In addition to managing academics and a growing social life, many students develop intimate relationships during college years, learning to integrate the emotional needs of others with their own. For *The importance of a personal relationship* (Figure 11), I wrote to Amber:

> Your boyfriend seemed to be the center of your social life during this period of your life (time at college). Personal relationships are very important in terms of understanding oneself – what we value, who we are, etc. In the drawing, you both have books on your lap, and pill bottles on the books. I found it interesting that you both had been taking (and still had the option of continued use) of pharmaceutical drugs – to help succeed in college. I thought of it as a statement about contemporary life for young people in a culture saturated in medicine.

The created image represents two strands in Amber's life, her serious relationship with a male, and their use of medicinal drugs to help them concentrate on studies. Having a boyfriend, Amber believes, "teaches you a lot about yourself and about being with someone. You test yourself. You just kind of see what kind of person you can be,
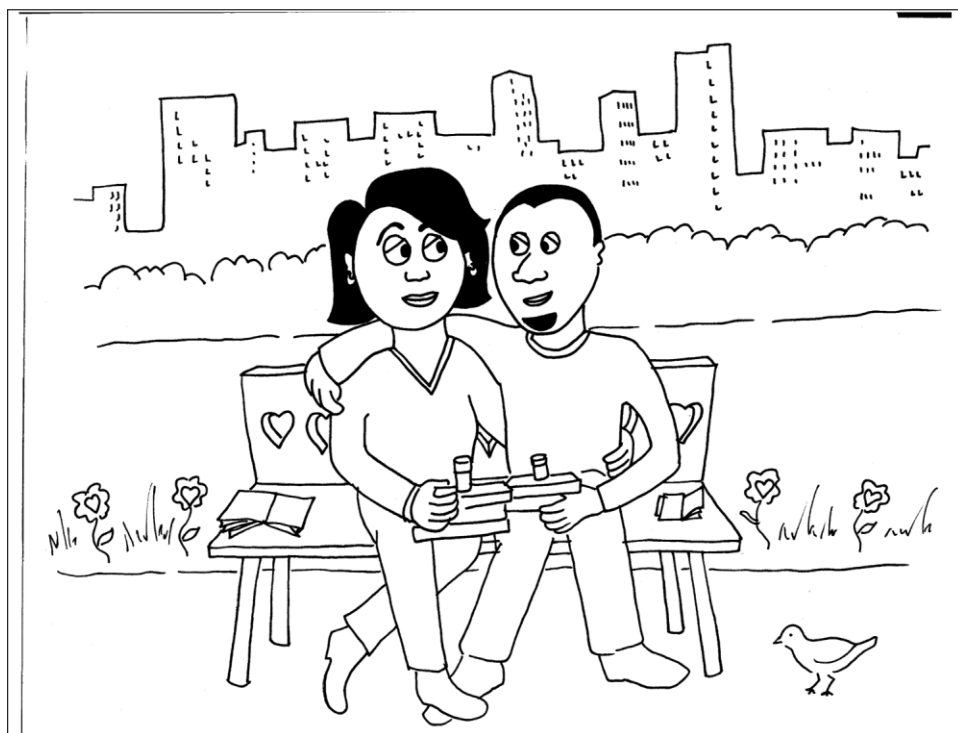

Figure 11.   The importance of a personal relationship (Amber).

learning to love someone else, be with them all the time," adding, "I've developed more, I think, because of being in a relationship." Their intimacy involves discussions about their Attention Deficit Disorder, which can take interesting turns, such as when Amber shares that despite her boyfriend's diagnosis by a licensed psychologist, "he says he doesn't think he has it, and I don't think he has it. But then again, anyone can say they have it."

Amber comments, "We did and still do spend a lot of time together, although he has more friends than I do, and goes out more than I do, but I'm okay with that." She adds, "I would like to hang out with people more, but I need friends for that." The image, she says, makes her think of "young love," and then playfully adds, "but I can assure you, we are MUCH better looking than those two on the bench."

In sharing *Feeling bad in different ways* (Figure 12), I explained to David: "Numerous times you conveyed how bad you felt during your first year at college. These included feeling caged, as if disappearing, isolated, and hunted. Altogether, these coalesce into a strong sense of how uncomfortable you felt." Some of the things that David shared included powerful statements such as: "I have no life," " I don't have any buddies," "I can't get drunk because I'd go into a coma due to my medication," and "I basically don't do very much except study and nurse my wounds from studying, figuratively. I get sad from studying, and then I don't work for a week … it's all very unstable." Taken together, David's experiences consistently proved painful, leaving him feeling as an outsider at best, and scapegoat at worst, with few options in between.

Referring to the first picture behind bars, he asked: "How do you imply I am innocent?" Signaling the image in which he fades away, David commented, "I like this one." Acknowledging the drawing of himself sitting on the bed with head in hands, he remarked, "This one is great." For the image of being pursued, David concurred that it was generally accurate but, "they need to change direction a bit. No fist."

When presenting Mary with *Four things that keep her centered/focused* (Figure 13), I commented: "These are part of how you manage. They give you purpose, hope, a sense of accomplishment, personal satisfaction. That you call them your 'children' reveals how important/close they are to you." Mary's dedication to own her education has influenced her personal long time on/off relationship with her boyfriend, and she grew wistful at the possibility of becoming a mother, and how difficult that would be for her.

Responding to the image, she wrote:

> This depiction is very accurate. Although I often neglect these children, I am forced to practice yoga and macrobiotics because without eating healthfully and meditating daily, I would not be able to survive in this world. Lately, I haven been giving more attention to the piano and study of Italian.

She continues wistfully stating, "This image makes me think of how much I want to nurture this family, but at times it can be very lonely and frustrating." Mary concludes that, "I need to share these activities with others in order to stay interested. I also need to remember to take baby steps. I don't have to practice for hours."

In their personal lives, all three participants held different perspectives, and these shaped their experiences accordingly. For Amber, an intimate relationship helped her mature and become more reflective. In David's case, he came to operate in "survival mode," remaining a loner, feeling bewildered by social cues he could not intuit, disappointed about anticipated or desired relationships that did not form. Mary, on the other
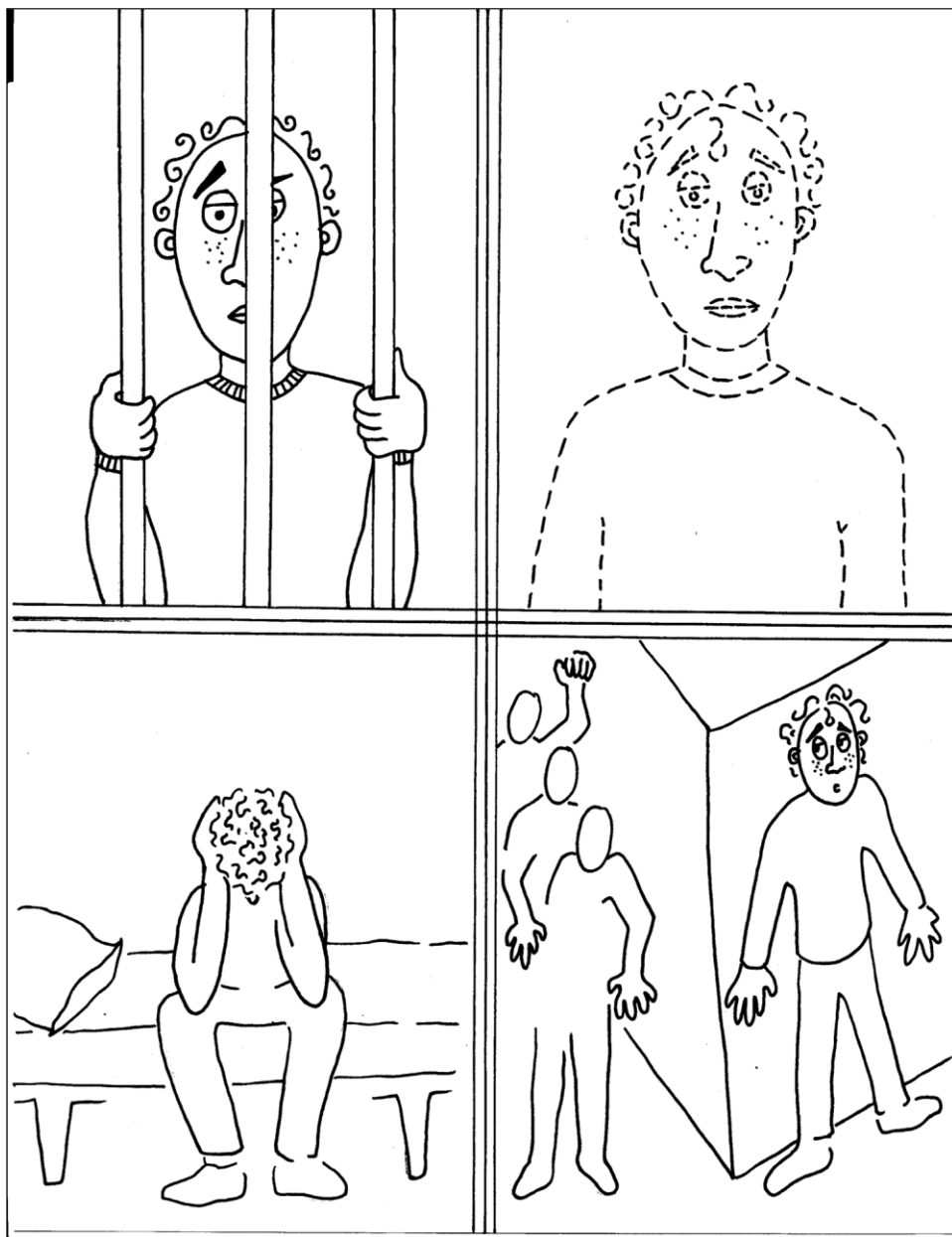
Figure 12.   Feeling bad in different ways (David).

hand, is very self-nurturing, happy to forgo cultivating new friendships in favor of keeping her eye on the prize, completing her degree.

All three participants were intrigued by incorporating cartoons as representation in the research process, and confirmed that in 21 of 24 (87.5%) images there was a sense of accuracy in how the images closely approximated their experiences. However, in a few instances, there existed a difference of opinion between my visual depiction and their own understanding of knowledge they shared. David, in particular, was very
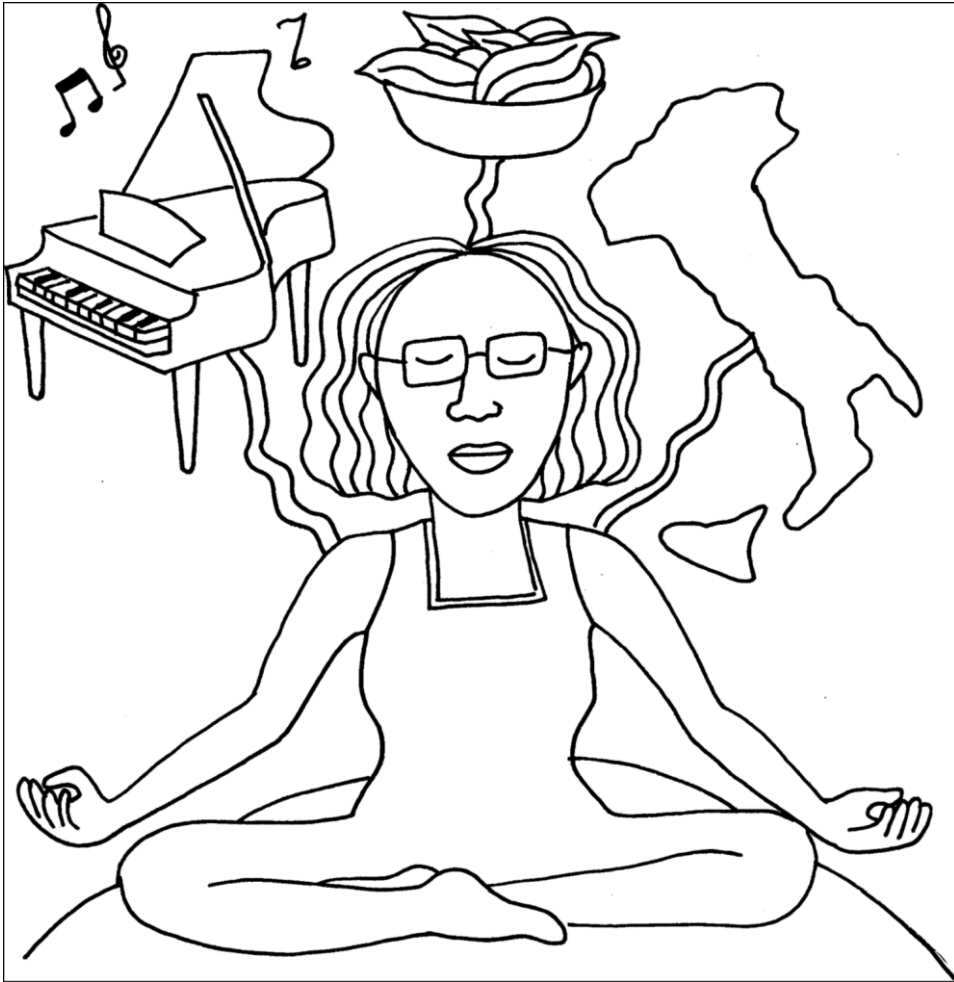
Figure 13.   Four things that keep her centered/focused (Mary).

concrete in his analysis, and asked for revisions to the drawings that would make them more accurately render a situation (such as making people look like they are running instead of merely walking fast), but not changing its meaning significantly. Amber did not understand one representation at all as she did not remember saying the phrase that prompted me to draw the main image.

Strengths of the study

In this study, representation by cartoons is tentative and exploratory. Nonetheless, I believe the use of cartoons as a way to stage data holds great potential for reaching a diverse audience. Generally speaking, when Fernald's (1943) principles of multi-sensory teaching are applied to research – for example the combination of visual and auditory and/or written forms – information presented in this manner is much more likely to be remembered. However, a strength of this method is not simply incorporating

the visuals, but rather the act of engaging participants in the Bakhtinian (1981) sense of dialogue with the purpose of negotiating meaning. In doing so, "outsider" epistemologies are respected as valuable sources of knowledge, serving as "counter-stories" to traditional discourses in both the LD and college educational literature. By using semi-structured interviews as springboards to actual conversations, participants and researchers have the opportunity to learn, both potentially benefitting from one another in the tradition of critical pedagogy (Freire, 1970).

On a separate yet related note, the value of using visual representations has greater significance than simply creating cartoons. The process of creating visual representations demonstrates a way of constructing knowledge. Information the researcher and participant chose to share is mediated by our values, interests, and motivation as collaborators (all, in turn, influenced by cultural, social, and historical forces). It is highly constructed and purposefully assembled to convey what we believe is important. Creating knowledge through the use of cartoons illustrates in a self-conscious manner the process through which many researchers subconsciously pass. In brief, the researcher holds the paintbrush, and the viewers/readers are spectators of a carefully executed canvas. The meaning of the canvas is further mediated by the life experiences of the spectators; knowledge is therefore created between viewer/reader and researcher, and is always partial. Conversely, knowledge representing "the Truth" cannot exist as a universal, fixed, objective phenomenon. As researchers, *how we interpret and construct knowledge* it is of great importance – for each knowledge claim has potentially far reaching consequences.

Limitations of the study

This study only represents three individuals with LD. As LD is experienced as a unique phenomenon, the narratives of participants may be mistaken as representative of the majority of college students with LD. In addition, although the study takes place in an urban setting, it features two European-Americans, and one Indian-American, not reflecting the overrepresentation of African-American and Latinos labeled LD in public schools. Indeed, the intersection between LD and race is undertheorized in special education literature, and should be addressed more openly (Blanchett, 2008). In terms of visual representation, it may be more accurate to recreate specific cartoons after participants have suggested changes, such as in David's case.

Conclusion

I have endeavored to show how cartoons can be used to present data in educational research. In having done so, I am obliged to ask, in what other ways might they be used? Can an entire study be presented in cartoon format with the same level of complexity and integrity that Spiegelman (1986) was able to convey in the depiction of the Holocaust? Might narrative research be made more interesting by the inclusion of cartoons or illustrations, similar to Kinney's (2007) *Diary of a wimpy kid,* described as "a novel in cartoons"? How could teachers and students use cartooning to represent themselves? What are further ways that a researcher could create space for co-creating cartoons with participants?

Finally, using cartoons continues to question the boundaries of research within education. As complex human beings, our personal interests – be they sport, drama, music, dance, and so on – can be used to present ways in which we engage with, and

understand, the world. By doing so, we can ensure that the parameters of qualitative research will be continuously expanded.

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