



**DIVERSITY, EQUITY,
INCLUSION & ACCESS**

Using Graphic Novels to Teach Diversity, Equity, Inclusion, and Social Justice: An Educational Technique

Lynette M. Carlson, DHSc*; Bry Edwards, MS†; Mikiko Aoyagi Nakajima, EdD‡

*University of Tennessee at Chattanooga; †Emory Sports Medicine Complex, Atlanta, GA; ‡Department of Kinesiology, California State University, Long Beach

Context: The Commission on Accreditation of Athletic Training Education Professional and Residency and Fellowship Standards indicate athletic training students, residents, and fellows must be trained in diversity, equity, inclusion, and social justice (DEI&SJ). Diversity, equity, inclusion, and social justice is a broad, complicated subject. Stereotyping and bias training are 2 topics within DEI&SJ that are important for providing culturally competent health care.

Objective: To detail a strategy for implementing concepts of DEI&SJ into athletic training education programs.

Background: As part of the health care team, athletic trainers are at the forefront of access to the medical system. Athletic trainers need to be prepared to service a growing diverse population.

Description: This learning activity enables athletic training educators to creatively engage students in discussion using graphic novels. This article describes the preparation and delivery methods for using graphic novels to teach stereotyping and bias concepts.

Clinical Advantage(s): Integrating graphic novels into a classroom activity allows students the opportunity for open communication with classmates. Interpreting graphic novels may increase patient-centered care by increasing empathy in athletic training students.

Conclusion(s): The inclusion of graphic novels into athletic training education using interpretation and open discussion techniques can expose students to complicated topics related to DEI&SJ.

Key Words: Graphic medicine, patient-centered care, bias, stereotyping

Dr Carlson is currently Assistant Professor and Clinical Education Coordinator at the University of Tennessee at Chattanooga. Please address correspondence to Lynette M. Carlson, DHSc, University of Tennessee at Chattanooga, Dept 6606 HHP, 518 Oak Street, Chattanooga, TN 30403. lynette-carlson@utc.edu.

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KEY POINTS

- Graphic novels are a unique method for engaging students in conversation about diversity, equity, inclusion, and social justice topics.
- Graphic novel interpretation may enhance patient-centered care by increasing empathy.
- Athletic training students enjoyed interpreting and discussing graphic novels over more traditional pedagogical methods.

INTRODUCTION

The Commission on Education of Athletic Training Education (CAATE) 2020 Professional¹ and Residency and Fellowship² Standards were recently updated to include diversity, equity, inclusion, and social justice (DEI&SJ) standards. These standards require educators to include cultural competency and cultural humility, among a myriad of other DEI&SJ topics, in athletic training curricula. Beyond the required standards, evidence supports formal DEI&SJ education as a fundamental part of health professions.³ Nursing students who attended formal classes focusing on culture scored significantly higher on measures of cultural awareness than students who had not.^{4,5}

The athletic training profession itself is not as diverse as the patient population it serves. As of April 2021, 81.45% of National Athletic Trainers' Association members identify as White, not of Hispanic origin, 5.25% Hispanic, 4.17% Asian or Pacific Islander, 3.82% African American, 2.13% multiethnic, 0.49% American Indian, 0.46% not available, 0.01% Alaskan Native, and 2.22% other.⁶ Despite the lack of racial diversity within the athletic training profession, health care services are provided across an increasingly diverse population, and the need for cultural understanding is essential.⁷ For example, the National Collegiate Athletic Association reports 63% of student-athletes identify as White, not of Hispanic origin, 16% Black or African American, 6% Hispanic or Latinx, 5% two or more races, 4% international, 3% unknown, 2% Asian, and a fraction of a percentage identify as American Indian, Alaska Native, Native Hawaiian, or Pacific Islander.⁸ In addition to racial diversity, the health care industry must also learn to accept differences in religion and gender identity and expression, among other characteristics. Authors of studies have shown athletes have a more positive outcome with injury treatment, as high as 82%, when their religious differences are considered.⁹ Transgender athletes often educate their health care providers on transgender-related topics before receiving treatment; the provider's lack of knowledge of transgender patient needs adds an unnecessary barrier to health care.¹⁰ However, although the new standards were incorporated to enhance DEI&SJ efforts within athletic training education, teaching DEI&SJ is a difficult task for many athletic training educators. In a 2020 survey of athletic training educators, over half (50.56%) of respondents believed

they did not possess adequate knowledge of cultural competency concepts.¹¹

It is apparent that effective and engaging methods to teach DEI&SJ topics are needed. Techniques for teaching DEI&SJ may include a variety of modalities including written case studies, safe space ally training,¹² study abroad programs,¹³ intergroup dialogue,¹⁴ and more. However, we are introducing an alternative pedagogy to use graphic novels or graphic medicine to teach DEI&SJ. Graphic novels are like comics. They are visual and textual stories deliberately sequenced as framed panels to tell the story of a character to convey information and produce responses from the viewer toward a specific topic.¹⁵ Similarly, graphic medicine uses graphic novels, comics, and visual storytelling in medical education and patient care related to health care and the life sciences.¹⁶ Despite appearing like comics, graphic novels can express sensitive issues, like DEI&SJ themes. For example, the Pulitzer Prize winning book *Maus: A Survivor's Tale* depicts the author interviewing his father about experiences as a Holocaust survivor.¹⁷ In education, graphic novels have been used to teach ethics to business students,^{18,19} bullying to nursing students,²⁰ empathy to medical students,²¹ and for patient education.^{16,22}

Several benefits are identified when using graphic novels as an educational tool over more traditional techniques. Graphic novels have the utility to engage students and increase enjoyment of the training over written case studies.¹⁹ Complex information can be efficiently and effectively communicated using the comic form,¹⁶ as one can imagine the amount of time required to read a written description of just one image or panel of a comic strip. In addition, students who grew up immersed in a media-oriented culture often learn better through visual means, allowing them to "hear" voices and "see" emotions.²³ Furthermore, the space between panels, where time moves forward, allows for rich interpretation. The reader, not the artist, must fill in the blanks and complete the narrative.¹⁶ Analysis of this space fosters skills to enhance students' observational and interpretive abilities, cultivating awareness of broader social and political issues used to further cultural competence.¹⁶ Therefore, using graphic novels can be a unique educational technique to teach DEI&SJ themes, specifically stereotyping and biases.

GRAPHIC NOVEL DESIGN AND IMPLEMENTATION

Standards and Objectives

This learning activity aligns with several CAATE Standards for Professional and Residency and Fellowship Programs. All programs must demonstrate "systematic diversity, equity, inclusion and social justice efforts in its development, design and delivery" (Professional Standard DEI 1 and Residency and Fellowship Standard 14).^{1,2} The Professional Patient-Centered Care Standards 56, 59, and DEI 2¹ and Residency and Fellowship Standards 32 and 35² address additional

DEI&SJ themes such as cultural competency, cultural humility, compassionate care and respect. Teaching learners to recognize their own biases and tendencies to stereotype is one aspect of DEI&SJ education. Our objectives for this activity were to (1) introduce the concepts of bias and stereotyping, (2) discuss and explore examples of bias and stereotypes in general and in health care, and (3) use an educational activity designed to engage students in interpretation, discussion, and reflection of bias and stereotyping in clinical practice.

Graphic Novel Preparation and Collaboration

To successfully complete this activity, relevant graphic novels must be used. One may scan published comics or graphic novels for relevant content, but we created our own through a collaboration process (see the Appendix). The approximate time from inception to completion for each graphic novel was approximately 3 months. To define DEI&SJ and narrow the focus, it is important to first identify the critical components for intervention by focusing on a theme and objective(s). This step took approximately 1 week. We focused on bias and stereotyping because, when health care providers allow biases and stereotypes to negatively impact patient care, it has a dramatic impact on the health and wellbeing of minoritized patients. For example, implicit or automatic biases influence assessments of pain, the quality of clinician-patient interactions, treatment choices, and accuracy of diagnoses.²⁴ Therefore, it was important to create content that developed an appreciation for the patient perspective, promoting empathy and patient-centered care.

After identifying the theme and objectives, we developed the scenario settings, characters, and script; sketched (pencil and paper) the graphics; and developed prompt questions and key points. These steps took approximately 6 weeks. When considering the content of the graphic novel, it is critical to ensure the context sparks conversation for group discussions. However, images and words should not be intentionally triggering, racist, sexist, or otherwise offensive. The objective is to open a conversation about how each graphic is interpreted by individual participants. In addition, the graphics do not have to be complicated to spark meaningful conversation. Two authors developed the stories based on real-life scenarios, and 1 author used their artistic talents to sketch a rough draft of the cases. When developing prompt questions and key points, it is important to ensure they align with the objectives identified in step 1.

The final steps are to hire a graphic artist to create professional-looking graphic novels and work closely with them to ensure clarity and accuracy. The cost may vary from \$25 per hour to \$50 per hour depending on the scope of the project and the experience of the artist. In lieu of hiring a graphic artist, consideration into interdisciplinary projects with the university art department could foster interdepartmental collaboration should time and resources allow. Because of the timeframe of our project, we hired an independent artist. Body language, facial expressions, silent thoughts, text, and environmental context all needed to be clearly and explicitly articulated to the artist to ensure no misinterpretation occurred.²⁰ The primary author communicated regularly with the artist to provide clarification as

needed. This step occurred over 3–4 weeks as the artist was creating the graphic novels.

When deciding whether to create graphic novels or use existing comics, access to talent, time, and money should be considered. If talent, time, money, or all the above are lacking, using existing graphic novels or comics can be accomplished in as little as 2 weeks by simply searching the Internet for comics related to a chosen theme or objective. The advantage of creating our own graphic novels was that we could focus on specific scenarios, collaborate with students to create the graphic novels, and the graphic novels can be used repeatedly with new classes.

Three-Phase Graphic Novel Activity

We formed this educational technique in 3 phases: (1) ensuring a sense of community, (2) silent reading and interpretation of the graphic novels, and (3) group discussion and reflection. After the stage was set and community formed, the graphic novel activity was completed within a 1-hour timeframe with 2 graphic novels.

Step 1: Ensure Sense of Community. Developing a sense of community is vital in the classroom. Students must feel safe and be empowered to be brave to express their thoughts and firsthand experiences without repercussions.^{25,26} Community is built over time; however, the rate at which each student cohort forms a community varies. Before the activity, our cohort shared at least 1.5 months together 4–5 days per week for 5–8 hours per day. A sense of community was already forming naturally when they engaged in this activity. However, building this sense of community and providing a safe and brave space for students to openly express their individual thoughts, attitudes, and behaviors need to also be deliberate. Before the activity, instructors should be aware of ways to create a safe and brave space by being nonjudgmental or unbiased or being respectful of others' opinions.²⁷ On the day of the activity, simple steps can be taken to create a safe and brave space by creating seating arrangements that allow classmates to see everyone, being in a classroom that is appropriate in size (not too small and not too large), and having good lighting.²⁷ Another way to create a brave space is for participants to take an active role in creating ground rules that will help establish norms and expectations for the group.²⁸ *Group norms* are the expectations and behaviors associated with a social group,²⁹ in this case, with classmates. For example, Arao and Clemens³⁰ recommend methods to establish these ground rules, such as “agree to disagree,” “don’t take things personally,” and “challenge by choice.” Similarly, for our study, expectations for group norms were adapted from the University of Tennessee at Chattanooga Safe Zone Program²⁶ before the activity and presented to the students for suggestions and agreement (Table 1).

Step 2: Silent Reading and Interpretation. Students were instructed to silently read a graphic novel from a projection. For example, the Figure includes the first panel of a graphic novel about stereotyping people with disabilities. Reading silently allows each student to form their own interpretation of the graphic novel, which is key. Graphic novels are rich in content, despite having limited words. Therefore, characters' expressions and body language, for example, may be interpreted differently by the reader. Most importantly, the process of interpreting body language and

Table 1. Example of Group Norms Established by Participants and Instructors or Facilitators Before the Activity

Item	Action
Safe space	Classroom space where all opinions and experiences are welcome.
Validation	All points of view are valid if speaking about one's own experiences. We will not disregard another's personal experiences.
Don't yuck my yum	If someone says something you are not comfortable with, do not shut down their feelings; it is okay to have different opinions.
Principle of charity	When interpreting someone's statement, assume that the best possible interpretation of that statement is the one that the speaker meant to convey.
Good intentions	We all have good intentions, and we do not wish to insult or say hurtful things.
Two ears, one mouth	We will practice good listening skills and not interrupt others.
Brave space	We may be clumsy with our words. That is okay.
Personal experiences	Participants and instructors or facilitators may share any personal experiences they are comfortable with.
Silence is golden	Participants and instructors or facilitators may choose to be silent, leave the room, or both without repercussion.
Vegas rule	What is said here stays here, and what is learned here leaves here.

expressions within graphic novels may lead to increased empathy.²¹ Further, the different interpretation leads to a more robust discussion in the third step.

Step 3: Group Discussion and Reflection. After silently reading and interpreting the graphic novel, instructors used prompt questions to begin the conversation (Table 2). Prompt questions are designed to facilitate discussion, not direct or lead the discussion. The individual interpretations completed in step 2 turned into a rich conversation. The group reflected on how everyone read the same graphic novel but realized differences in each scenario. After 20–25 minutes, discussions ended with key points (Table 3) focused on bias and stereotype education. Key points were established by the instructor or facilitator before the activity to ensure all educational objectives were met during discussion. After the first novel, the group completed a second graphic novel interpretation and discussion.

PRELIMINARY OUTCOMES

The retrospective review of the surveys taken after this classroom activity were approved under an exempt status by the local institutional review board. Thirty-two graduate athletic training students (15 from California State University, Long Beach and 17 from The University of Tennessee at Chattanooga) were surveyed 4–7 days after the graphic novel activity soliciting feedback on the learning activity. Twenty-

seven of the 32 students completed the response survey for an 84% participation rate. All participants were in their first year of a graduate athletic training program. Fourteen students reported having taken at least 1 course on multicultural or cultural competency topics while in school, and 12 students reported attending at least 1 workshop or training seminar on multicultural or cultural competency topics. Student self-reported demographics are presented in Table 4.

The student surveys expressed several advantages to this activity. Overall, students had positive perceptions of the graphic novel activity. More than 85% (23/27) preferred this activity over more traditional methods such as lectures, role playing, reading a case in paragraph form, drafting a paper, or watching a video. On a 0–100 scale, with 100 representing *enjoyed tremendously* and *extremely beneficial*, respectively, the average score was 73.5/100 when asked, “How much did you enjoy this activity?” and 79.5/100 when asked, “To what degree do you feel the activity is beneficial for learning bias and stereotyping?” Students expressed their favorite aspects of the activity, including “hearing different perspectives on different topics,” “hearing classmates’ different takeaways on the graphic novels,” “thinking more about how my culture affects my actions,” and “it was easy to learn about the topic—pictures are sometimes easier to visualize what is being asked or talked about.”

The consensus from an instructor or facilitator perspective was that students interpreted the graphic novels differently, which led to a rich discussion. For example, the Figure shows the first page to the “Disability = Adaptability” graphic novel. During this story, the athlete playing wheelchair basketball is pushed by a classmate down the hall without her asking for help. The athlete did not appreciate this interaction and educated the classmate on consent. Some students interpreted the scenario by thinking the athlete responded harshly to the classmate offering help, while other students expressed that the classmate overstepped. The difference in interpretation opened the door to discuss how people in wheelchairs are stereotyped as well as students sharing their own experience with being stereotyped. The conversation allowed students to hear multiple perspectives of the same scenario. The conversation among the students also created another advantage for the instructors. As discussed, over half

Figure. The first panel of a graphic novel developed for stereotyping and bias discussion.



Table 2. Examples of Prompt Questions

Area	Question
Interpretation	In your own words, describe the graphic novel case. Why did the male character feel the need to offer help? How do you think that made the person in the wheelchair feel?
Personal experiences	Have you worked with or known people with disabilities? If so, are they physically active? What are their preferences regarding asking for help or needing help? Do you have a disability you would like to share? If so, what are your preferences regarding asking or needing assistance?
Clinical application	The male character was wondering why our athlete was in a wheelchair; do you often have those thoughts when seeing someone in a wheelchair? Do you ask? As a health care provider, how would you learn about a patient's abilities? If you learn of a patient's impairment or disability you are unfamiliar with, what would be your approach to learn more?

(50.56%) of athletic training educator respondents believed they did not possess adequate knowledge of cultural competency concepts.¹¹ However, the graphic novels allowed ease of conversation that stemmed from different interpretations. Subsequently, the activity asks students to share their experiences rather than hearing everything from instructors, thus decreasing the stress on instructors to have to teach and know everything.

Advantages

Graphic novels have been used in other health professions and possess a promising approach to address a critical need in athletic training education: to teach DEI&SJ. Recent researchers in athletic training education suggest other techniques for teaching DEI&SJ themes and increasing cultural competency including Safe Space Ally Training,¹² study abroad programs,¹³ and intergroup dialogue.¹⁴ While each pedagogy has advantages, they each have challenges as well. Safe Space Ally Training is a valuable program that can be integrated into athletic training curriculums.¹² However, the primary focus of this program is limited to providing patient-centered care for patients and athletes or clients that identify as lesbian, gay, bisexual, transgender, and queer+, whereas graphic novels can expand beyond sexual orientation, gender identity, and gender expression themes. While study abroad programs are valuable for increasing cultural awareness,¹³ alternative approaches are worth exploring due to the potential travel and financial burden on students. The

intergroup dialogue technique is another promising pedagogical approach to promoting cultural competency in athletic training; however, trained facilitators that are familiar with intergroup relations and the use of strategies to create a healthy dialogue environment are needed.¹⁴ We also believe skilled facilitation of discussion is needed for the graphic novel activity. However, while formal facilitation training is valuable, as athletic training educators advance their understanding of cultural competency and cultural humility, it may not be required to achieve a healthy dialogue. We believe making DEI&SJ themes accessible for all willing to facilitate these discussions is important work. While each educational technique has advantages and disadvantages, graphic novels could enhance or supplement existing educational initiatives.

Challenges

Despite the promise of graphic novels, 3 potential challenges were identified. As with other classroom discussions, some students did not contribute to the discussion. However, this was within the group norms for this activity, as we did not want to force anyone to participate in the discussion if they did not want to. A couple of students expressed being uncomfortable expressing their ideas and feelings, fear of being judged, and being uncomfortable talking about stereotypes placed on them. This is expected when discussing any topic that may be controversial within contemporary society. One way to combat this is to adopt the terms both safe space and brave space before the discussion of graphic

Table 3. Examples of Key Points for the “Disability = Adaptability” Graphic Novel Developed by Instructor or Facilitator Before the Activity

Key Points
Not all disabilities are visible. Some are hidden or invisible. One could have physical, developmental, intellectual or learning, psychiatric, visual or hearing impairments, or neurological disabilities.
Do not make assumptions about a person's ability.
Ask before acting, or consider not asking at all.
Do not take offense if they say no to your offer for assistance. They may have been asked 10 times prior.
Approach people with a sense of interest and care. Demonstrate respect and empathy.
Do not expect a person with a disability to share their story. It is not their responsibility to educate you.
Persons with disabilities learn how to adapt to their abilities.
A person's assistive devices (eg, wheelchair, cane, crutches) are part of their person. Do not touch without getting consent.
Learn to navigate our inherent biases and how to not let them influence patient care and patient-client interactions.

Table 4. Student Self-Reported Demographics (N = 27)

Parameter	Value
Age, average (range), y	23.7 (21–31)
Sex	
Female	16
Male	11
Gender identity	
Women	16
Men	11
Race ^a	
White or Caucasian	20
Black or African American	4
Asian American	3
American Indian, Native American, or Alaska Native	2
Native Hawaiian or other Pacific Islander	1
Ethnicity	
Not Hispanic or Latinx	22
Hispanic or Latinx	5
Religion	
Christian	19
Atheist or agnostic	4
Other or declined to answer	4
Fluent languages	
English only	25
Fluent in another language	2 (1 Korean, 1 Spanish)
Home NATA district ^b	
District 8 (CA, NV, HI, American Samoa, Guam)	12
District 9 (FL, GA, AL, MS, LA, TN, KY, PR, VI)	11
District 4 (OH, MI, IL, IN, WI, MN)	2
District 3 (SC, NC, VA, WV, MD, DC)	1
District 7 (NM, AZ, UT, CO, WY)	1

Abbreviation: NATA, National Athletic Trainers' Association.

^a Students were asked to check all that apply.

^b Home NATA district signifies "where you've spent the most years of your life."

novels. *Safe* implies that no harm will be done, but it may sometimes be impossible to create a truly safe space within the classroom, especially for marginalized individuals.³¹ However, the term *brave space* conveys the message that the environment may be challenging and uncomfortable. Regardless of the terminology used, creating the ground rules together with the participants seems to be an important process to encourage participation and create a safe and brave space, as described above.³⁰

Another potential difficulty may be that the content could be a trigger for participants. One student commented that their least favorite part of the activity was "expressing the stereotypes given to me." One way to combat this would be to use trigger warnings, but a considerable amount of debate exists regarding trigger warnings in higher education.³² Recent researchers have shown that trigger warnings may undermine

Table 5. General Advice to Instructors or Facilitators

- You do not have to know all the answers. It is okay to say, "I don't know."
- Be prepared to share personal experiences. Go into the discussions knowing what you feel comfortable sharing and what you would like to keep private.
- Facilitate the discussion. Do not feel pressure to steer the discussion. Questions are just prompts. Use the prompt questions at your discretion, and see what direction the students take the discussion.
- Encourage participation, but do not require it or single out students.
- Have campus, community, or both resources available for any student expressing the need for additional emotional support. Examples may include the office of diversity, equity, and inclusion; multicultural affairs; counseling center, or university health.
- Make support resources available in your learning management system (eg, Moodle, Blackboard, Canvas). Consider adding a module where students can privately communicate with you and check in if needed.

emotional resilience³³ or reinforce the survivors' view that the trauma is central to their identity.³² Therefore, rather than avoiding the topic with a trigger warning, it is recommended to create the safe and brave space to face the topic at hand. Another way to combat the issues with triggers would be to ensure relevant emotional and psychological support resources are available to the participants if needed. This may include services such as counseling and psychological services on campus or the office of disability services for students.

Lastly, another difficulty may be the lack of comfort of the instructor or facilitator to discuss the topic at hand. We acknowledge that some conversations are uncomfortable for athletic training educators, and it takes time to be able to facilitate difficult conversations with ease. All educators are encouraged to take steps toward developing cultural competency and strive for humility.³⁴ Table 5 provides several words of advice to instructors as they prepare to facilitate graphic novel discussions. Becoming culturally competent is a journey. Therefore, educators should give themselves time and space to increase their own cultural competency. Embracing the concept of *cultural humility*, however, is beneficial. Cultural humility recognizes that we cannot be all knowing about all people and cultures. We can, however, have humility that we are striving to increase our knowledge and understanding of others. Additionally, reimagining the instructor's role in the classroom as a facilitator of activities for students to learn together with the instructor, as opposed to being the main purveyors of knowledge,³⁵ is a suggested approach for this activity. Our hope is that instructors will be willing to take this journey with the students as everyone embraces the concept of cultural humility.

Next Steps

Next steps of this project would include expanding the number of times throughout the curricula we use graphic novels and using graphic novels for preceptor education. Diversity, equity, inclusion, and social justice should be incorporated throughout the curricula; one 1-hour activity is

not sufficient to embrace cultural competency and cultural humility. In addition, adding measurement of cultural competency is beneficial. Several tools exist for measuring cultural competency. The Cultural Awareness Scale⁴ (CAS) determines the effectiveness of cultural competency training. The CAS uses a 35-item Likert scale to self-report 3 subscales: general attitudes, research attitudes, and clinical experiences. With permission, the CAS can be modified to include athletic-training-specific language. The Tool of Assessing Cultural Competence Training³⁶ is another tool to determine the effectiveness of cultural competency training. This 19-item questionnaire focuses on 3 domains: allocation of resources and structures, learning outcomes or curriculum, and policies. Capturing student cultural competence measurements longitudinally allows athletic training education programs to assess the effectiveness of DEI&SJ interventions.

CONCLUSIONS

Graphic novels are a beneficial method to expose athletic training students to complicated topics related to DEI&SJ. We discussed why and how to incorporate graphic novels as an educational tool to teach DEI&SJ topics. Although facilitating discussions on DEI&SJ topics can be difficult, using graphic novels can increase student engagement and enjoyment as well as lessen the burden on the instructor. Interpreting graphic novels may increase observational and interpretive abilities, furthering cultural competence,¹⁶ empathy, and patient-centered care.²¹

We hope using graphic novels provides educators with an alternative method for incorporating DEI&SJ topics into their curriculum. However, as mentioned, one 1-hour in-class activity is not sufficient to teach complicated DEI&SJ topics. Additional DEI&SJ themes should be incorporated throughout curricula to adequately prepare students for culturally competent clinical practice.³⁵

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Appendix. Representation of Graphic Novel Creation Timeline

