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## The Immortal Life of Henrietta Lacks: Using a Common Read to Transform a Learning Community

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# The Immortal Life of Henrietta Lacks: Using a Common Read to Transform a Learning Community

## **Abstract**

First-year seminars and learning communities (LC) have been used to help increase retention, provide continuity, and support students as they transition to the university setting. Another high impact educational practice—common intellectual experiences (CIE)—includes student activities centered on a theme to help facilitate learning, increase involvement, and provide continuity; one such example is a common read. A group of interdisciplinary faculty created a health sciences specific learning community to help increase cultural awareness and understanding. *The Immortal Life of Henrietta Lacks* was used as a CIE to meet course objectives in all LC classes and provide a background to health sciences and caring professions. Data were collected from students (n=14) by using an instructor-developed instrument that evaluated student knowledge of stem cell research, medical advances due to stem cell research, ethics in medical research, the African-American experience (1930s-1960s), and socioeconomic disparities in America. Results indicated statistical significance for the three content areas emphasized throughout the course. Further, results suggest that in LCs in which the students have similar academic and career goals, use of a common intellectual experience can enhance critical thinking and deep learning.

## **Keywords**

common read, common intellectual experience, learning community, first-year experience, health sciences

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## **Introduction**

### **Common Intellectual Experiences/ High Impact Practices**

Providing a means to ensure student success is paramount for all colleges and universities in today's financial market. Students and parents want to see how courses are helping to prepare the student for the marketplace in future years. First year seminars and learning communities (LCs) have long been used to help increase retention and to provide continuity and support for students as they transition to the university setting (Andrade, 2007; Goldman, 2012; Ward & Commander, 2011; Warthington, Pretlow, & Mitchell, 2010). As a result, many of the colleges and universities that desire to improve retention, engage students, and help students achieve success now use some form of first-year learning communities or experiences.

Both LCs and Common Intellectual Experiences (CIEs) are considered "high-impact learning practices" (HIP) that help guide curriculum and student engagement in the crucial period of entering higher education (Kilgo, Ezell Sheets, & Pascarella, 2015; Kuh, 2008). CIEs include theme-based activities designed to facilitate learning, increase involvement, and provide continuity. One example is a common reading, for which all students read the same book and participate in learning activities based on the themes identified in the reading (Kuh, 2008). Like other HIPs, CIEs have been shown to engage students, limit attrition, and promote student success (Center for Community College Student Engagement, 2014; Kuh, 2008).

### **First Year Learning Communities**

Interestingly, across the country, first-year Learning Communities can look quite different, with one longitudinal study noting that over one quarter of them do not include any academic component (Brower & Inkelas, 2010). Despite this variability, retrospective analysis of HIPs, CIEs, and LCs has shown that students learn and collaborate more effectively and that these practices help to develop collegial relationships that benefit students in the future (Fuller, King, Moore, Saint-Louis, & Tyner-Mullings, 2016). Professional programs have shown similar results, and a recent study of nursing students showed that those participating in learning communities remain more engaged and more likely to finish nursing school in a timely manner (Johnson, 2016).

Learning Communities can help bridge the gap from high school to the college or university level by furthering goals for individual learning and educational responsibility. Many students enter higher education unprepared to assume the personal responsibility required to achieve a positive learning outcome

(Weinstein, Acee, & Jung, 2011). Additionally, Learning Community participation encourages self-reliance and provides a strong support network that is accessible throughout the college years ensuring greater academic and personal success.

### **Learning Community Structure at Western Carolina University**

At Western Carolina University (WCU), the goal of an academic Learning Community is to enhance learning, foster connections, and integrate academic experiences by placing students and faculty in a section of intentionally grouped courses (Western Carolina University, 2017). The faculty and administration at WCU believe that this can achieve significant impacts on learning outcomes as students develop a strong support network, build friendships, and experience learning in a dynamic fashion. Additionally, participation in an LC helps meet the University goals of developing a sense of place and integrating knowledge principles (Western Carolina University, 2017).

In alignment with the University goals for Learning Communities, a group of inter-disciplinary faculty created a health sciences specific introductory seminar housed within a Learning Community with three other linked courses, for a total of four courses. The overarching goal of this LC was to help raise cultural awareness and understanding. Three of the linked courses were required: a health sciences specific university seminar, a health and wellness class, a first-year writing course, and a social work course on cultural awareness. (The fourth course, an optional study abroad course, did not fill.) Faculty wanted to have a shared intellectual experience amongst the students and so, after lengthy discussion, selected *The Immortal Life of Henrietta Lacks* (Skloot, 2010) as a book that could be used to meet course objectives in all four classes and also provide a background to the health sciences and caring professions.

*The Immortal Life of Henrietta Lacks* is the story of an African-American woman who developed cervical cancer in the early 1950s. During treatment, her cells were taken without her informed consent. These cells, which were replicated in the lab, proved to be essential in countless medical advances for the next fifty years. Although her cells generated millions of dollars, her family never received any benefit (Skloot, 2010). The debate over the ethics of her treatment has led to multiple changes in how research is conducted on human subjects. The story of Lacks' life and the family she left behind is layered into the examination of ethical wrongdoing. This book offers an ideal common intellectual experience for students because it addresses cultural issues, science, ethics, health, and history during the last fifty years.

A variety of professional journals published reviews of Skloot's book (Gifford, 2012; Powell, 2011; Scannell, 2010), and many high schools, colleges, and universities have assigned it as a common reading experience. Despite positive reviews and use of the book in educational settings, there have not been

many research studies on its value as a curricular tool. A few studies discuss using the text in specific disciplines such as pharmacy education (Black, PolICASTRI, Garces, Gokun & Romanelli, 2012) and molecular biology (Resendes, 2015).

This study used *The Immortal Life of Henrietta Lacks* as a common intellectual experience for first-year students in a year-long Learning Community. Students read the book and participated classroom experiences based on its content. Core competencies for health science majors were included in the first-year seminar course to help provide a foundation for inter-disciplinary collaboration. The faculty designed a research study to evaluate the effectiveness of this HIP because they were interested in knowing if this shared common read would improve critical thinking and increase knowledge of scientific topics and diversity. The research questions that guided this study were:

1. To what degree will the use of a Common Intellectual Experience (common reading) in an interdisciplinary Learning Community increase student understanding of diversity?
2. To what degree will the use of a Common Intellectual Experience (common reading) increase critical thinking skills and deep learning?
3. Will the use of a common reading increase knowledge of scientific concepts (such as stem cell research, medical ethics, etc.)?

### **Conceptual Framework**

According to Carrino and Gerace (2016), Learning Communities, as they are currently understood and implemented, are conceptualized through Tobin's sociocultural perspective (2012, 2015). This perspective offers an explanatory framework of the socialization aspects of the learning environment (Carrino & Gerace, 2016). Among these features are the social exchange and reciprocal nature of learning—"how students learn with others, through others, and from others, as well as the importance of collective relationships and social networks to an individual's outcomes" (Carrino & Gerace, 2016, p. 2). Learning reinforced through interactions with others may also be explained by social learning theory (Robbins, Chatterjee, & Canda, 2012). Bandura's (1977) social learning theory, which connects behaviorist and cognitive frameworks, posits that people and their environments influence one another through a process called "reciprocal determinism." In this framework, both person and environment, or the learning community, are active agents, influencing and being influenced by one another.

Bandura contends that people learn through observing other people's behavior, attitude, and outcomes (1977). Learning is conceptualized through four observational processes: *attention*, *retention*, *production*, and *motivation* (Bandura, 1977). Robbins, Chatterjee, and Canda (2012) explain Bandura's framework this way: *attention* requires the learner to focus on relevant material and filter out extraneous information; *retention* is related to knowledge or behavioral recall that

may be stimulated through various mechanisms; *production* demonstrates the ability to replicate the learned knowledge, attitude, and/or behavior; and, *motivation* is the culminating act of sustaining the learning process. They add that Bandura suggests that rewards, ranging from positive instructor acknowledgement to high grades to academic awards/scholarships, are not sufficient enough to motivate the learner. Instead, the learner must develop value for the learning outcome or the knowledge and competency gained (Robbins, Chatterjee, & Canda, 2012). Further, they suggest that for Bandura, motivation is influenced by positive rather than negative reinforcement and that perceived self-efficacy and self-reinforcement are factors related to sustaining learning. For example, individuals who assess themselves capable of learning and reinforce their learning with meeting self-directed standards are able to sustain their motivation for learning more effectively than individuals who avoid learning challenges and doubt their abilities (Robbins, Chatterjee, & Canda, 2012). This conceptual framework may appear obvious; however, there are critical implications for Learning Communities. When implementing an LC, it is important to explain the social learning process—specifically, the process of how we learn from each other and how we create an environment that encourages learning from one another. Positive reinforcement and the cultivation of self-efficacy are core aspects of an effective Learning Community.

Tobin (2012, 2015) and Bandura (1977, 1986) represent traditional conceptualizations of sociocultural and social learning frameworks. There are valuable and relevant considerations from their frameworks; however, to transform the learning space and community, hooks (1994) offers an emancipatory conceptualization for transcending the traditional, one-directional classroom environment. Influenced by Freire's (1968) critical pedagogy and rejection of the "banking system" of education (i.e. students as passive receptacles of information), hooks embraces an action-oriented approach to learning she refers to as "teaching to transgress" (hooks, 1994). This approach is predicated upon breaking down traditional boundaries in the classroom and, in their place, creating an engaged pedagogy that emerges from the development of a learning community. In her transformative pedagogy, hooks includes the following emancipatory elements: 1) the learning space should be exciting; 2) interest should be cultivated in one another; and 3) engaged learning is developed through reciprocity. She rejects the idea that an exciting, enjoyable learning space cannot also be serious. In fact, she posits that in order for students to become intellectually curious and academically engaged, educators must disrupt boring learning environments (hooks, 1994).

Common intellectual experiences, such as common readings with significant and deep content like *The Immortal Life of Henrietta Lacks* (Skloot, 2010), have the potential to act as these disrupting forces and create interest in content that students may otherwise perceive to be boring and bland. Further, CIEs have the

potential to cultivate student interest in one another. hooks (1994) emphasizes that this interest is critical to the learning community in that it renders “invisible” students “visible” by amplifying students’ voices and requiring their active presence. Carrino and Gerace (2016) also emphasize the importance of student-to-student and student-to-instructor relationships and the co-creation of knowledge in the Learning Community framework. In fact, their research suggests the social and relational aspects of Learning Communities are the foundation for student engagement.

Although it is incumbent upon the instructor to genuinely value and invite the engagement of every student, reciprocity and collective responsibility must exist between and among the instructor and students in creating a dynamic learning space (hooks, 1994). Within the Learning Community framework and in the use of CIEs, instructors should explain the importance and expectations of this reciprocal process. Many students and instructors are quite comfortable in one-directional methods of pedagogy. CIEs disrupt this status quo educational experience. Through CIEs, everyone in the classroom space is expected to contribute. In this sense, hooks (1994) contends that Learning Communities, as transformative pedagogical practice, are “an act of resistance countering the overwhelming boredom, uninterest, and apathy that so often characterize the way professors and students feel about teaching and learning, about the classroom experience” (p. 10).

Further, this deconstruction of traditional ways of learning and, conversely, socialization to alternative, engaged pedagogies is essential prior to full introduction of a CIE. The CIE in this particular study not only addressed content knowledge but also competency development in the areas of critical thinking, ethics in research, cultural disparities in health care, and socioeconomic disparities. These are topics that may cause students to experience discomfort, tension, and anxiety. Of course, these are challenging thoughts and emotions for students to process and experience but are also critical to professional growth and development (Wiersema, Licklider, & Ebbers, 2006). Educators should not shy away from difficult conversations and intellectually-challenging content (Stebbleton & Jehangir, 2016); however, in embracing a transformative pedagogy, instructors may cultivate the elements hooks (1994) articulates so that students are better prepared to address uncomfortable and critical topics such as racism, sexism, and economic exploitation. The act of building a Learning Community creates the environment in which students participating in a CIE can critically interrogate scientific concepts and deconstruct divergent cultural experiences (Soria & Mitchell, 2015; Wiersema, Licklider, & Ebbers, 2006).

Once a collaborative learning environment has been established, hooks (1994) suggests that students can move into a space of critical consciousness, constructive confrontation and critical interrogation. It is in this space that *content* may be interrogated in its *context*. The context in which the CIE exists in this study

is one of bioethics and racial and class exploitation. hooks (1994) acknowledges that both instructors and students may fear the outcome of this type of learning environment and activity. Deconstructing challenging issues may evoke strong emotions among students and instructors. In these contentious settings, it may be helpful for the instructor to introduce—and for the students to embrace—the concept of cultural humility as opposed to the more familiar framework of cultural competence. The concept of cultural competence implies that one may reach a level in which a full understanding of another culture is achievable. Conversely, cultural humility reflects a long-term process in which individuals are “continually engaged in self-reflection and self-critique as lifelong learners and reflective practitioners” (Tervalon & Murray-Garcia, 1998, p. 118). Tervalon and Murray-Garcia explain that the culturally humble framework asks healthcare providers (and other professionals) to develop self-awareness of the power dynamics between those who are being helped and those who are helping. As students learn to develop practitioner-client relationships, they must understand the importance of mutually beneficial client relationships that are non-threatening, non-judgmental and free from paternalism. Learning this is crucial for forming authentic client advocacy partnerships (Tervalon & Murray-Garcia, 1998).

Within the culturally humble framework, permission is given to students to not be the expert of other people’s cultural experiences. Reframing this approach from one of competency to humility may help to minimize the anxiety students in a CIE—and other classroom activities—often experience when they believe they must hold the “correct” or “acceptable” perspective about socio-cultural issues before engaging in dialogue. However, this acknowledgement also does not absolve them of their ethical responsibility to develop awareness of how culture affects people’s lives, well-being, and experiences. hooks (1994) underscores the responsibility of integrating culture and its context into our Learning Communities: “It forces us all to recognize our complicity in accepting and perpetuating biases of any kind” (p. 44). Our hope is that by developing the knowledge of critical consciousness and the skills of constructive confrontation and critical interrogation through the use of a CIE, our students will embrace a culturally humble approach and be better prepared to serve an increasingly diverse population.

## Methodology

### Sample

The participants (n=20) in this study were enrolled in the first-year Learning Community, *Eat, Pray, Love, London*. Data discussed in this article was collected from the students who completed enrollment in both the fall and spring semester (n=14). All participants were first year students who identify as female. The Learning Community was geared toward students interested in health-related



majors. As such, 12 students were pre-health majors (nursing, recreational therapy, and nutrition), one was a social work major, and one was an early childhood education major.

## **Procedure**

After approval from the Institutional Review Board (IRB), data was collected at three points during the 2016-2017 academic year using a Qualtrics survey. The first data set was collected in September, prior to use of the common reading; the second set was collected in December during the last week of Fall semester. Due to technical issues, the second set of data collected was completed on paper. This data set did not ask questions about the students' engagement with their peers and therefore is not discussed in this article. Finally, the third complete set of data was collected via Qualtrics survey during the last week of Spring semester classes.

## **Instrumentation and Measures**

Data collection was completed using a Qualtrics survey created by two of the Learning Community instructors. The survey was divided into three different sets of questions: set one referred to themes and topics discussed in *The Immortal Life of Henrietta Lacks*. The instructors of the LC courses identified five themes that emerged from the book and would be applicable to all of the LC linked courses. These themes were: stem cell research, medical advances due to stem cell research, ethics in medical research, the African-American experience in the United States from 1930s-1960s, and socioeconomic disparities in America. Additionally, set one included questions about students' familiarity interacting with the themes via writing: ethical research in writing, writing effective arguments, and understanding complex arguments. Set one asked students to rate their familiarity with topics from the book on a five-point Likert scale with one being associated with "very unfamiliar" to five being associated with "very familiar."

Set two focused on students' perceived level of engagement in Learning Community outcomes and asked students to rate how often they saw a connection in course material between their Learning Community courses (with choices including "never", "sometimes", "often", and "always"). Set three asked students to describe their academic habits such as coming to class unprepared, studying with members of the LC, and collaborating with LC members (again with the choices "never", "sometimes", "often", and "always").

## **Analysis and Results**

Because the sample size of our participants ( $n = 14$ ) does not allow for a traditional analysis indicating statistical significance, tests were analyzed

descriptively. Means and standard deviations were calculated on each of the survey questions. Paired *t*-tests were used to determine if there were changes in familiarity with concepts discussed in *The Immortal Life of Henrietta*, level of engagement, and academic habits from data collection period one and three. All statistical analyses were performed in SPSS statistical software (version 20.0; IBM Corp, Armonk, NY).

The mean for participant responses increased for every question that aimed to determine if there were changes in familiarity with concepts discussed in *The Immortal Life of Henrietta Lacks* (see Table 1). The participants used a 5 point scale to answer questions.

**Table 1. Changes in Familiarity with Concepts Discussed in Book**

Topic	Mean (SD) Pre	Mean (SD) Post	<i>P</i>
Stem cell research	2.93 (0.73)	3.36 (0.93)	0.165
Medical advances due to stem cell research	3.07 (0.83)	3.43 (1.02)	0.292
Ethics in medical research	3.14 (1.10)	4.07 (1.21)	0.072
African American experience 1930s-1960s (pre/post Civil Rights Era)	2.50 (0.76)	3.64 (1.01)	0.001*
Socioeconomic disparities in America	2.21 (0.58)	3.57 (1.16)	0.004*
Ethical research in writing	2.57 (0.76)	3.79 (1.19)	0.002*
Writing effective arguments	2.86 (0.86)	3.79 (1.21)	0.060
Understanding complex arguments	3.00 (0.96)	3.79 (1.19)	0.015*
* Values of <i>P</i> < 0.05 are considered significant.			

The mean for participant responses increased for every question that aimed to determine if there were changes in students' levels of engagement (see Table 2); the changes were statistically significant for three of the five questions. The participants used a 5 point scale to answer questions.

**Table 2. Changes in Students' Levels of Engagement**

Topic	Mean (SD) Pre	Mean (SD) Post	<i>P</i>
Combined ideas from different classes to complete coursework	2.29 (0.73)	3.07 (0.83)	0.035*
Connected your learning to societal problems or issues	2.43 (0.65)	3.36 (0.63)	0.002*
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	2.93 (0.62)	3.36 (0.63)	0.054
Learned something that changed the way you understand an issue or concept	2.93 (0.73)	3.21 (0.70)	0.263
Connected ideas from your courses to your prior experiences and knowledge	2.64 (0.75)	3.21 (0.70)	0.040*
* Values of <i>P</i> < 0.05 are considered significant.			

The mean for participant responses increased for five of the six questions that aimed to determine if there were changes in students' academic behaviors (see Table 3); the changes were statistically significant for the one question where students had a more negative behavior at the end of the study. The participants used a 4 point scale to answer questions.

**Table 3. Changes in Students' Academic Behaviors**

Topic	Mean (SD) Pre	Mean (SD) Post	P
Asked questions or contributed to class discussion in other ways	2.79 (0.80)	3.00 (0.78)	0.487
Come to class without completing readings or assignments (reverse coded)	2.23 (0.43)	1.36 (1.08)	0.008*
Asked another member of your Learning Community to help you with course material	2.36 (0.75)	2.50 (1.02)	0.686
Explained course material to one or more members of your Learning Community	2.43 (0.51)	2.86 (0.86)	0.139
Prepared for exams by discussing or studying with Learning Community members	1.86 (0.95)	2.43 (1.22)	0.230

\* Values of  $P < 0.05$  are considered significant.

## Discussion

This study addressed three research questions. The first question addressed whether the use of a Common Intellectual Experience in an interdisciplinary Learning Community would increase student understanding of diversity. The findings indicated statistical significance for an incredibly small sample size ( $n = 14$ ) for three content areas emphasized throughout the course: understanding the African American experience, socioeconomic disparities in America, and connecting learning to societal problems. While the findings can only be considered descriptive in nature, we believe they are indicative of the impact the CIE had on our students' understanding of diversity. Students in the Learning Community shared in class discussion their surprise to learn that African Americans were treated so poorly mere decades ago. From their perspective, such treatment occurred further in the past (prior to the 20<sup>th</sup> century) and did not occur at a systematic level. As we dissected societal and ethical issues presented in *The Immortal Life of Henrietta Lacks* and began to draw parallels to treatment of African Americans in the mid-20<sup>th</sup> century to today, the similarities became clear to the students.

For example, as part of the Health and Wellness course, students worked in groups on a culminating project related to current social or policy themes introduced in the Henrietta Lacks story. One group examined the history of medical research on race and did a presentation about the Tuskegee experiments on African-American men and syphilis in the 20<sup>th</sup> century. Another group looked at the current disparities in healthcare in the United States and examined the Patient Protection and Affordable Care Act. In both these projects and in others in the class, the students connected the themes in the book with other aspects of American history and culture. Such connections gave students a clearer understanding of the African American perspective, and elicited clear emotional responses. Many students expressed anger and dismay over the issues presented in the text. Students indicated

that this knowledge would help them in their future careers as healthcare practitioners.

These findings support and extend the current research that LCs and CIEs are high-impact practices that facilitate learning (Kuh, 2008). Specifically, the LC framework of this course provided an environment where students were able to increase cultural awareness and understanding through the incorporation of social learning processes around a common reading. Instructors drew on Carrino and Gerace's (2016) work by developing trust and creating strong relationships before the group tackled the difficult material in Skloot's book. The collaborative learning in the form of small group projects and presentations allowed students to not only learn from their instructors but to see their peers as co-creators of knowledge themselves (Carrino & Gerace, 2016). For example, inspired by the life of Henrietta's daughter Elsie, one student group researched the history of mental health facilities in America. Their research uncovered startling information about the treatment of those with "diminished mental capacities" as well as where and how patients were given "treatment" for such illnesses. Their research made them consider how society's perception of others affects policy, resources, and practices. Additionally, they discovered how cultural interpretations may explain treatment for, or reaction to, those with mental illness. The students confirmed that after researching this topic they were more acutely aware of how culture and society may impact their future patients and patient families and of how they as health practitioners must consider such factors. The above example demonstrates how instructors created dynamic learning spaces that transformed the learning experience.

The second research question considered to what degree the use of a CIE would increase critical thinking skills and deep learning. The pre/post measures posed an array of questions in an effort to determine increases in critical thinking skills and deep learning (for example, understanding complex arguments, combining ideas from different courses, connecting ideas to previous experiences). The findings indicated significance in only one area, the application of ethical research in writing. Students may have perceived a larger amount of growth in this area because the concept of research is so intensively discussed in the Writing and Rhetoric class. In previous academic experiences (including high school) the students likely did not have exposure to prolonged discussion about how to conduct research, how to scrutinize the strength of another's research, and how to articulate these findings to others. The material in *The Immortal Life of Henrietta Lacks* fully demonstrates these research concepts, making them incredibly salient for readers. The growth in this area may be attributed both to the Writing and Rhetoric learning outcomes as well as the CIE.

The limited sample size, variation in individual student experiences and abilities, the introductory nature of the course and first-year experience, and/or the

pre/post measures used for assessment may explain why significance was achieved in some areas of critical thinking skills and deep learning. This may also be due to the development of critical thinking and deep learning that takes place throughout the undergraduate experience. The first-year often focuses on knowledge/content development (areas in which growth was indicated) whereas critical thinking skills develop gradually over time (areas that showed some growth, but not statistical significance).

While we found many positive outcomes from our Learning Community, at least one negative outcome was clear. Students said that by the end of the year they came to class without completing assignments or readings. Students verbally shared with their Writing and Rhetoric instructor during the Spring semester that they had grown tired of talking about *The Immortal Life of Henrietta Lacks*. While the students read the complete book during the fall semester (when they were enrolled in Health and Wellness and University Seminar), the Spring semester focused on different aspects of the book. In Writing and Rhetoric, the book helped students better understand aspects of writing, research, and ethics. While students were not asked to reread the book in its entirety, there were specific sections highlighted for discussion. The students admitted (verbally in class and on the post-test) that they rarely, if ever, reread the material. They felt confident that reading the book once was thorough enough for their needs. The instructor, however, found the students' confidence misplaced since they struggled to find or recall detailed information that would illuminate the class topics. The students' lack of preparation for the Spring classes may indicate their belief that they were familiar enough with the material to get by in class without additional work. Most of the students were also enrolled in Chemistry and pre-nursing courses and often discussed how these courses (not linked to the LC but common for most of them) took up most of their out-of-class prep time. To combat these issues, the authors suggest that, when a CIE is used over multiple semesters, one alternative is to spread the reading out over the course of both semesters to increase engagement and provide "new" content to learn and explore. An additional consideration to the students' engagement with the content during Spring semester was their relationships with one another. As Watts (2013) suggests, the group's hyperbonding toward the end of their second semester may have negatively impacted their productivity in class.

The third research question addressed whether the use of a common reading would increase knowledge of scientific concepts. While statistical significance was not obtained for the scientific concepts addressed in this course (stem cell research, medical advances due to stem cell research, and ethics in medicine), positive trends were noted with increases in group mean scores. The absence of significant findings may be due to a number of factors, including the broad scope of these concepts, the pre/post measures used to assess specific areas of increased knowledge, and a limited sample size. Students may have struggled with assessing their own

knowledge of these content areas given that this CIE served as an introductory and foundational experience.

Our work in this LC suggests that that use of a CIE can positively impact student learning. While we did not see positive statistical significance in each area of measure, on the whole, students completed the LC experience with a deep understanding of issues that will relate to their future scholastic and career goals. The results of our work signal the importance of engaging with the theme of the LC in a cohesive, structured manner. The CIE allowed students to become increasingly familiar with a piece of evidence and to examine it in a number of different ways. As students became more familiar with the content of the CIE, they were able to make connections across courses and beyond.

### **Implications and Limitations**

*The Immortal Life of Henrietta Lacks* (Skloot, 2010) was a powerful tool as a common reading experience in our LC. Our students engaged with this book in several ways. Most of our students enjoyed reading the book. Their comments on the reading assignments were overwhelmingly positive, which is not always true in the college population. Additionally, the students engaged in meaningful conversations about racial struggles in America, ethical principles, science concepts, and health disparities. Assignments and reflections on these topics appeared to have an impact on the students' thinking about history, culture, and health in a broader context beyond themselves.

Our study had limitations relative to our goal. The intent of the study was to assess how using a Common Intellectual Experience in a Learning Community might foster deeper learning and increase cultural awareness and diversity awareness. The assessment took place in the first year of a new campus Learning Community model that spanned two semesters. Due to the logistical issues of creating Learning Communities, the enrollment in the LC (and therefore the sample size) was small and was not very diverse. As such our findings cannot be generalized out to a larger population. The significant changes in our students' understanding of diversity, particularly the African American experience, could also be attributed to their personal experiences growing up in rural, majority white populations. It may be that students who have had more interactions with people of color would indicate less growth than our own students did. An additional limitation is that our study did not control for other non-LC first year experiences that could have exposed students to formative intellectual experiences and greater diversity awareness.

Perhaps the largest limitation was the student fatigue caused by the continual use of the book for two semesters. We believed the students' ability to unearth and explore complex arguments and societal issues in a text would be more likely if they were consistently engaged in the text with one another. Many of the topics in

the book would create challenging thoughts and emotions for the students to process and, as Wiersema, Licklider, & Ebberts (2006), argue, such experiences are critical to growth and development. Faculty envisioned a classroom atmosphere that would support students as they experienced discomfort, tension and anxiety introduced by topics in *The Immortal Life of Henrietta Lacks*. While students did struggle with the material and have hard conversations with one another, they also grew tired of the book as a primary document of study. Faculty members linked CIE material to other readings but may have relied too heavily on *Lacks* as a curricular tool. This may especially have been the case in the Spring semester as the new faculty member for the Learning Community had been waiting a semester to engage in the conversations that began in early Fall. We suggest that, if a CIE is used in a Learning Community (particularly one spanning multiple semesters or more than two courses), faculty should seek a balance of using the CIE and connecting other, supplemental readings/course material.

Future studies related to common intellectual experiences would continue to build our understanding of how students are impacted by integrated academic material. However, should such studies be conducted, we suggest a large, diverse sample, perhaps conducted across multiple locations.

### **Conclusion**

The results of this study suggest that in Learning Communities in which the students have similar academic and career goals, use of a CIE can enhance critical thinking and deep learning. Use of a CIE can make students more aware of the interdisciplinary connections by demonstrating the various ways themes connect to course material. The story of Henrietta Lacks and her family is a powerful one. It highlights many themes in 20<sup>th</sup> century American culture that continue to be relevant in the 21<sup>st</sup> century. As a curriculum tool, this book created rich learning opportunities for students. Pairing a CIE with a Learning Community is ideal because the relatively small class size and specific theme create conditions to explore a text in a structured and detailed manner. However, faculty members should be cautious of how much time is spent on the CIE in each course so that students do not become enervated with the material. As a curriculum tool, *The Immortal Life of Henrietta Lacks*, as well as other CIEs, can create rich learning opportunities for students.

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**Table 1. Changes in Familiarity with Concepts Discussed in Book**

Topic	Mean (SD) Pre	Mean (SD) Post	<i>P</i>
Stem cell research	2.93 (0.73)	3.36 (0.93)	0.165
Medical advances due to stem cell research	3.07 (0.83)	3.43 (1.02)	0.292
Ethics in medical research	3.14 (1.10)	4.07 (1.21)	0.072
African American experience 1930s-1960s (pre/post Civil Rights Era)	2.50 (0.76)	3.64 (1.01)	0.001*
Socioeconomic disparities in America	2.21 (0.58)	3.57 (1.16)	0.004*
Ethical research in writing	2.57 (0.76)	3.79 (1.19)	0.002*
Writing effective arguments	2.86 (0.86)	3.79 (1.21)	0.060
Understanding complex arguments	3.00 (0.96)	3.79 (1.19)	0.015*

\* Values of  $P < 0.05$  are considered significant.

**Table 2. Changes in Students' Levels of Engagement**

Topic	Mean (SD) Pre	Mean (SD) Post	<i>P</i>
Combined ideas from different classes to complete coursework	2.29 (0.73)	3.07 (0.83)	0.035*
Connected your learning to societal problems or issues	2.43 (0.65)	3.36 (0.63)	0.002*
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	2.93 (0.62)	3.36 (0.63)	0.054
Learned something that changed the way you understand an issue or concept	2.93 (0.73)	3.21 (0.70)	0.263
Connected ideas from your courses to your prior experiences and knowledge	2.64 (0.75)	3.21 (0.70)	0.040*

\* Values of  $P < 0.05$  are considered significant.

**Table 3. Changes in Students' Academic Behaviors**

Topic	Mean (SD) Pre	Mean (SD) Post	<i>P</i>
Asked questions or contributed to class discussion in other ways	2.79 (0.80)	3.00 (0.78)	0.487
Come to class without completing readings or assignments (reverse coded)	2.23 (0.43)	1.36 (1.08)	0.008*
Asked another member of your Learning Community to help you with course material	2.36 (0.75)	2.50 (1.02)	0.686
Explained course material to one or more members of your Learning Community	2.43 (0.51)	2.86 (0.86)	0.139
Prepared for exams by discussing or studying with Learning Community members	1.86 (0.95)	2.43 (1.22)	0.230

\* Values of  $P < 0.05$  are considered significant.