Considering Transformative Learning for Adolescents Enrolled at Semester Schools

Lisa Meerts-Brandsma[1] and Jim Sibthorp[2]

Abstract

This study examines semester schools, which have elements associated with transformative learning, and an adolescent population, where transformative learning has less commonly been studied. We administered the Learning Activities Survey pre/post semester ($n = 173$) and followed the survey with semistructured interviews ($n = 30$) to assess whether students experienced Mezirow's stages of transformative learning and achieved perspective transformation. Our results suggest that adolescents experience the stages of transformative learning more frequently at semester schools than at their originating schools. However, while students said they achieved perspective transformation on the surveys, interviews revealed that the outcome might better be described as a cycle of identity formation. Students said that the relationships with teachers and students, time for reflection, and the structure of the semester were important to their learning. Specifically, a supportive but challenging environment provided content that they reflected on to gain insight into their values and beliefs.

Keywords

experiential education, transformative education, personal transformation

Transformative learning theory describes the processes a person undergoes when they irreversibly transform the way they "experience, conceptualize, and interact with the

[1] Weber State University, Ogden, UT, USA
[2] University of Utah, Salt Lake City, UT, USA

Corresponding Author:
Lisa Meerts-Brandsma, Weber State University, 1435 Village Dr. Dept. 2801, Ogden, UT 84408, USA.
Email: lmeerts@weber.edu

world" (Hoggan, 2016, p. 71). It stems from Mezirow's (1991) theory of perspective transformation where a person transforms their frame of reference, and in doing so comes to see the world differently. Many proponents argue that transformative learning is a superior type of education that is emancipatory in nature. It can support a person in living a life that is authentic to their values and beliefs rather than living by the values adopted blindly through socialization (Kegan, 2000; Mezirow, 1991). While a person may experience negative emotions such as guilt and shame as they undergo transformative learning, the result is generally considered positive. Transformative learning theory emerged from adult education in the late 1970s, and most research has focused on adult populations (K. P. King, 2009; Taylor & Cranton, 2012). Researchers know little about the adolescent experience of transformative learning, although several theorists have debated directly and indirectly how it might apply (Illeris, 2014; Kegan, 2000; Merriam, 2004; Mezirow, 2000). Assuming adolescents can experience transformative learning, this type of learning might benefit them by clarifying their values in a way that could positively impact how their life unfolds.

Certain educational opportunities for adolescents promote themselves as providing transformative learning in which students are taught to question their assumptions. Ideally, transformative learning leads to meaningful change that is both lasting and expressed across multiple domains such as school, work, and home (Hoggan, 2016). Some youth who participate in these programs describe themselves as being transformed, such as in semester schools' (2018) marketing materials, although it is unclear whether their transformation fits within the scope of transformative learning or could be better described as something else.

Semester schools are a relatively new educational experience that is limited to one semester, or roughly 3 months, and is designed to complement an adolescent's typical high school experience. Students who enroll at semester schools primarily come from across the United States, form a cohort that is unknown prior to the semester, and live together in a bounded social system with their faculty. Each semester school has a different curricular focus, examples of which include sustainable farming, ethics and leadership, marine biology, and conservation. They teach a traditional U.S. high school curriculum using their particular focus as a centerpiece and employ experiential education where students engage in hands-on learning to achieve their outcomes. While it seems plausible that semester schools facilitate transformative learning, little empirical research has examined the outcomes semester schools produce for adolescents to see whether they fit within transformative learning theory, or has examined how the activities or processes the schools use may achieve transformative learning.

Experiential Learning, Transformative Learning, and Adolescence

Experiential and transformative learning share certain similarities that may make them complementary frameworks. Semester schools employ an experiential learning pedagogy. Experiential learning describes a cycle in which students have direct

experience and undergo a process of reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). One key theory within transformative learning theory is Mezirow's theory of perspective transformation, which describes a 10-stage process that begins when a person has an experience where new information does not fit within their existing frames of reference[1] (K. P. King, 2009; Mezirow, 1978). From this point, a person undergoes a recursive process that may include the following steps: The person may question their assumptions; they may find a community where people are having similar realization, and they may engage in discourse with that community; they may acquire information and skills to experiment with new behaviors; and they may ultimately integrate their new behaviors into their lives (Mezirow, 1991). Both transformative and experiential learning theories depend on reflection as a critical element. While arguments exist about how these definitions vary (Mezirow, 1991), they share undeniable similarities. Dewey, often seen as one of the earliest proponents of experiential education (Breunig, 2009), defined reflection as "assessing the grounds of one's beliefs" (Dewey, 1933, p. 9). When Mezirow (1991) described reflection in his theory, he differentiated his definition of reflection by calling it critical or premise reflection where "reflection is the process of critically assessing the content, process, or premise(s) of our efforts to interpret and give meaning to an experience" (p. 104). While transformative and experiential learning theories are different, there is precedent to study them in tandem (cf. Glisczinski, 2011; Strange & Gibson, 2017). However, whereas experiential learning is frequently considered powerful for adolescent populations (e.g., Nagaoka et al., 2015), transformative learning theory is infrequently considered outside of adult education.

Mezirow (2000) argued that adolescents could undergo an experience with transformative learning but that their developmental stage might limit them to being able to question the assumptions of others or assumptions about things that were external to themselves. The types of cognitive processing, or thinking, a person engages in progress over a lifetime. In order to transform their habits of mind, they need to be at a developmental stage where they can consider epistemic issues. If they cannot think at an abstract level, whatever transformations occur could be limited in their extent and insufficient to be considered perspective transformation. Kegan (2000) offered a more nuanced perspective, bringing cognitive developmental theory into transformative learning. For transformation to occur, he argued, some form must exist that can be transformed. For most people, the form is the as yet unexamined habits of mind that they adopt from their primary caregivers as they grow up. Over decades, their tendency towards abstract thought increases, and they become better capable of understanding themselves, their motivations, and how others can meet their needs (and vice versa). Part of the adolescent experience involves shifting from a primary focus on the self to being able to focus on others and their needs—or, in Kegan's words, from the instrumental to the socialized mind (Kegan, 2000). Once in the socialized mind, a transformative learning experience may move a person towards a self-authored epistemology where they understand themselves and their behaviors

through their own perspective as opposed to external perspectives, such as their parents (P. King et al., 2009). A person needs to have transitioned from the self-oriented to socialized mind as a precursor step to transformation. However, it is unclear at what point in typical adolescent development that a person may be developmentally prepared for a transformative learning experience (Taylor, 2000).

Transformative learning is typically initiated by a disorienting dilemma, which Mezirow (1991) described as "an externally imposed epochal dilemma" (p. 168). Some people may experience a disorienting dilemma as a thunderclap, as in the case of a sudden death. Other people come to a slow awakening that may be sparked by a conversation, or a novel idea. Herbers and Mullins Nelson (2009) suggest that experiential education may introduce disorienting dilemmas. By virtue of the fact that semester schools are grounded in experiential education, they may expose students to experiences that could be disorienting and thereby prompt transformative learning. In addition, their structure could contribute to transformative learning because they likely provide many adolescents with their first experience of living away from home for an extended period of time.

Study Purpose

The primary goal of this explanatory sequential study (Creswell, 2014) is to understand the extent to which adolescents can experience transformative learning. More specifically, we studied whether semester schools are a setting where adolescents experience perspective transformation. If so, we wanted to understand what features of the experience and what characteristics of the individual might facilitate perspective transformation.

Method

To inform the study purpose, we employed an explanatory sequential design in which we used a quantitative survey to gather data about transformative learning at semester schools and secondarily used qualitative interviews to verify and illustrate the quantitative data (Creswell, 2014). We surveyed students in the first 2 weeks of the semester and 2 weeks after they attended a semester school in spring 2018. The first author interviewed a subset of students about their experiences in summer 2018, roughly 1–3 months after their semester school ended. We interviewed students within a few months of the semester school experience to help prevent recall bias (Bell et al., 2019). The Semester School Network is a coalition of 11 schools that share common features of semester schools. They operate across the United States and internationally and recruit students who are typically in their junior year of high school, although sophomores and seniors also attend. They vary in size from less than 20 to just over 50 students per cohort.

Measures

The Learning Activities Survey (LAS)

The LAS is an instrument K. P. King (2009) developed to measure Mezirow's 10 stages of transformative learning and perspective transformation, which is the outcome of transformative learning. It includes a survey with four sections and a semistructured interview. The first section asked students to mark whether they agree with a series of statements that align with Mezirow's 10 stages of transformative learning. The second section asked whether they experienced perspective transformation and if so, to describe what transformed. The third section asked them to identify what people or activities contributed to their transformation. The fourth section contained demographic questions. If students stated that they did not experience perspective transformation, they skipped the third section and proceeded to the fourth. The interview protocol mirrored the questions in the written LAS.

A person who states that they experienced at least one stage of transformative learning, affirms that they had perspective transformation, and whose description of their transformative learning aligns with previous literature on transformative learning (K. P. King, 2009; Mezirow, 2000) was categorized as having perspective transformation. A subset of students who reported perspective transformation was then interviewed using a semistructured interview protocol based on the LAS. Consistent with the explanatory sequential design, the interview allowed us to gain more complex and detailed information about their answers, understand the nuances of what transformed, the extent to which it transformed, and verify the quantitative findings.

Presemester and Postsemester Surveys

The presemester survey contained the first, second, and fourth section of the LAS and was intended to assess transformational learning prior to the semester school. The postsemester survey included the complete LAS and was designed to identify transformational learning that occurred while at a semester school. We administered the presemester survey within the first 2 weeks of the start of the semester and the postsemester survey in the 2 weeks after their semester concluded.

All students enrolled at a semester school who had received parental consent to participate in the study were invited to take the presemester and postsemester surveys. We analyzed the surveys as two data sets. The first included matched surveys in which the participant took both the pre- and postsemester survey and allowed us to examine characteristics that might predict transformative learning. The second included only the postsemester survey and allowed us to examine characteristics of the transformative learning experience.

Semistructured Interviews

The final question on the LAS invited participants to complete a semistructured telephone interview with the first author. All students who agreed to the interview

were invited to participate, creating a convenience sample. The interview script paralleled the LAS survey questions but allowed the interviewer to investigate the participant's answers with additional probes. Interviews lasted between 25 min and an hour and were recorded and transcribed.

The first author began the interviews using the broad, open-ended questions from the LAS and followed up by asking students to provide examples or say more about a particular topic. As the interview concluded, the first author shared her interpretation of participants' responses by repeating back what they had said and explaining how she thought it related to the research questions. She then asked students to clarify any misunderstandings she might have about their responses. The purpose of reflecting back responses to participants was to engage in cocreated meaning-making and to verify the accuracy of her interpretation through a form of member checking (Lincoln & Guba, 1985). In qualitative research, the researcher is both the data gatherer and the data analyst, which creates opportunities for bias to be introduced (Miles & Huberman, 1994). When the researcher shared her interpretations of participants' responses with them, it provided them a platform to assert their voice and increase the validity of the qualitative findings.

Analyses

We used an exact sign test to determine whether students experienced more stages of transformative learning and perspective transformation in the semester before or after their semester school. Bivariate correlation determined whether perspective transformation prior to their semester school was related to the likelihood that a person experienced perspective transformation at their semester school.

We used thematic analysis, a technique that can be applied to qualitative data to identify patterns in participants' responses (Braun & Clarke, 2006). Two coders independently developed codes in the data using an open coding scheme (Saldaña, 2009). Each interview was considered the unit of analysis rather than each question the interviewer asked. Thus, if the participant described uncovering their values at any point in the interview, their interview was coded for uncovering their values. The coders met to discuss and define their codes in an iterative process and addressed any discrepancies to achieve agreement in virtually all of the cases. We then used an axial coding process to collapse the codes in themes (Saldaña, 2009). The first author conducted interviews in the summer (1–3 months) after their semester concluded.

IRB

This study was reviewed and approved by the second author's institutional review board. All parents received a consent form, and their children received an assent form and acknowledged consent to having their interviews recorded.

Results

Matched Pre- and Postsemester Survey Results

Semester school students completed surveys before and after their spring 2018 semester, and 74 provided complete pre- and postsemester data. Participants who supplied matched surveys ranged in age from 15.5 to 17.9 ($M = 16.9$, $SD = .63$). We had 4 Asian, 5 Black or African American, 1 Hispanic or Latino, 1 multiracial, and 63 White participants in our sample. Fifty-six were female and 18 were male. Semester schools, in general, have more than 50% female students, and one school enrolls only female students.

We examined whether students reported perspective transformation more frequently before or after their semester school. In the semester before their semester school, 28 (38%) students reported perspective transformation whereas, after their semester school, 69 (93%) reported perspective transformation. An exact sign test showed that significantly more students reported perspective transformation after their semester school, $p \leq .001$.

The LAS measures how many of Mezirow's 10 stages of transformative learning a person experienced (see Table 1 for the frequency of stages pre- and postsemester, and an exact sign test of the stages). Students reported significantly more occurrences of each of Mezirow's 10 stages after their semester school except for Stages 2 and 3, where there was no significant difference in the number of students who maintained their beliefs before or after their semester school, or in their critical assessment of epistemic, sociocultural, or psychic assumptions.

Postsemester Only Survey Results

Some students only completed the postsemester survey. When these responses were combined with students who offered complete pre- and postsemester surveys, the results produced a postsemester sample with 178 students who ranged in age from 15.4 to 18.9 ($M = 17$, $SD = .60$). Eleven students were Asian, 6 were Black or African American, 5 were Hispanic or Latino, 153 were White, and 3 did not report their race. One hundred and twenty-five were female, 51 were male, and two did not indicate their gender. After removing incomplete responses, the final sample included 173 students.

Based on the LAS, 164 (95%) students reported perspective transformation after their semester school. Figure 1 shows the frequency that students identified different activities or processes as associated with perspective transformation at their semester school. Participants could select multiple activities or processes. The primary activities or processes were relational and focused on teacher and student relationships, followed by reflection, the structure of the experience, social aspects, and the curriculum.

In order to illustrate the different ways that students reported being transformed during their semester school, codes were developed from the open-ended questions

Table 1. Mezirow's Stages of Transformation Pre- and Postsemester.

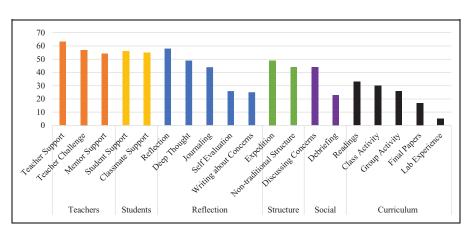| Stage	Pre Semester	Post Semester	Switched to No	Switched to Yes	Stayed the Same	p Value
Disorienting dilemma						
Actions	32	63	2	33	39	<.001
Social roles	43	57	6	20	48	.006
Self-examination with feelings of guilt						
Changed beliefs	25	39	8	22	44	.009
Maintained beliefs	24	23	16	15	43	1
Critical assessment of epistemic, sociocultural, or psychic assumptions	40	43	14	17	43	.36
Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change	30	57	6	33	35	<.001
Exploration of options for new roles, relationships, and actions	36	59	4	27	43	<.001
Planning a course of action	16	55	2	41	31	<.001
Acquisition of knowledge and skills for implementing one's plans	13	37	6	30	38	<.001
Provisional trying of new roles	27	50	11	34	29	<.001
Building of competence and self-confidence in new roles and relationships	19	48	6	35	33	<.001
A reintegration into one's life on the basis of conditions dictated by one's new perspective	17	40	8	31	35	<.001
Does not identify with any stages	4	0	4	0	70	NA

Note. n = 74.

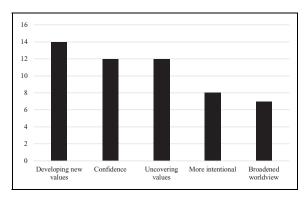**Figure 1.** Frequency of activities associated with transformative learning.

Figure 2. Frequency of what transformed based on open-ended responses to the Learning Activities Survey (only counts about five were included).
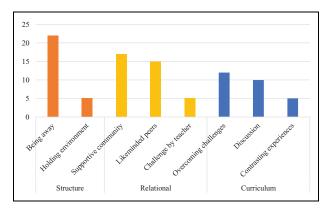

Figure 3. Frequency of activities identified in open-ended survey questions (only counts above five were included).

in the LAS ($N = 117$); 29% of the students who reported perspective transformation did not provide complete answers to the open-ended questions. Figure 2 shows that students said they developed new values, uncovered the justification for existing values, gained confidence, and shifted their perspective on the broader world. Codes with a frequency count of less than five were not included in the figure. When students described how they transformed, they identified that they primarily developed new values, gained confidence, uncovered their values, became more intentional, and broadened their worldview.

Figure 3 shows the activities or characteristics of the experience that were most important to how they transformed based on the open-ended LAS questions ($N = 117$). Students identified eight factors as most important: being away from home, the supportive community, being with a group of likeminded peers, overcoming

challenges, discussions, the holding environment, contrasting experiences, and being challenged by a teacher or mentor.

Semistructured Interviews

The first author interviewed 30 students in summer 2018 between June and August by telephone after they returned home from their semester school to better understand the answers to their survey questions.

What Transformed

Students said they transformed in three types of ways (see Table 2): their beliefs, values, and expectations; their ways of being; and their skills. They developed new beliefs, affirmed their existing beliefs, or identified beliefs that they had not realized they held. Their ways of being changed because they became more confident, more engaged in learning, more grounded in the present moment, more intentional, or more open to experiences. Their skills changed because they developed a broader worldview where they could situate themselves in relation to others, critical thinking where they were better able to question the world around them, relationship skills where they were able to authentically communicate, empathize and be vulnerable, and by expanding their comfort zone where they were willing to tolerate and persist through difficult experiences.

However, while they identified the above changes, they wrestled with whether their experience fell within perspective transformation.

> I would say it was transformational experience. It confirmed a lot of assumptions I had about the ways the world worked in what we learned in classes . . . I came to a confident conclusion about the ways the world works in that way. It's hard to say whether I really came to new conclusions or whether I became open to accepting new conclusions.

This quote describes how the semester school affected the student's assumptions and skills but also denotes the difficulty the student had in determining what actually transformed. For example, the student in the above quote identified that previous assumptions were confirmed, which indicated that they underwent a critical examination of their beliefs but maintained them, but the student also states that they achieved new conclusions. The student then suggests that perhaps their openness changed rather than their assumptions changing.

The quotes in Table 2 are representative of the themes that emerged through the data. Many of the quotes demonstrate how students thought that the semester school thrust them into experiences that taught them about themselves. The result of those experiences was a better understanding of themselves, including their likes, dislikes, and capabilities. Some students could identify a concrete shift, such as a student who became an advocate for gun control, but many described a process more akin to uncovering or revealing than transforming.

Table 2. Student Descriptions of How They Transformed.

Theme	Code	Description	Quote
Beliefs, values, expectations	Developing new values	Students adopted a value, ethic, or belief that they had not previously held.	There was not one particular point [where I realized my values changed], but a lot of little things. People had texted me from home, which made me realize that I didn't match up with them. When I got back—they tried to update me on drama and who was dating who, and I didn't care about it at all. I was a lot more excited to talk about experience and cultural immersion, and all they cared about was filling me in on home drama.
	Uncovering values	Students gained a greater understanding of values they already found important but did not realize they held because they had not critically examined them.	[My semester school] confirmed a lot of assumptions I had about the ways the world worked in what we learned in classes. I had heard my parents talking about climate change. It supported that with information. I came to a confident conclusion about the ways the world works.
Ways of being	Gained confidence	Students felt they were better able to express themselves (even with people who disagreed with them), more able to engage in new experiences without anxiety, and had greater tolerance for the unknown.	I definitely felt a change in a lot of things. Like self-confidence, for one. Over the semester it really improved for me. I wasn't confident or anything before I went. But realizing that I could make friends at a place like this, and run a half marathon and actually get excited about things like this, and be able to trust myself really improved throughout the semester because I'd never been put in those situations at public school.
	Understood self	Students had a better understanding of what they wanted for themselves and what they needed to be successful.	I felt like I came into myself or emerged as a more powerful form of myself. At the root, I'm the same, but I feel calmer and more independent. It just emphasized all of my best qualities. It emphasized that I should trust my opinions or speak them. It made me realize what about myself I want to highlight. It helped me deal with anxieties or insecurities that previously stressed me out a lot.

(continued)

Table 2. (continued)

Theme	Code	Description	Quote
	Understood self in relation to others	Students recognized that they had an impact on others. Some applied this at the local level (e.g., the group they were with), whereas others applied it to a global context (e.g., how being a U.S. citizen affects people in other countries).	It was just the immersive environment where you're always with others. I was never really alone. It was frustrating at times because I appreciate my alone time, but it also allowed me to take into consideration everyone else's actions.
Skills	Developed relationship skills	Students could build deeper, more meaningful connections with their peers, and could more effectively contribute to teamwork.	One of the things was learning how you're going to work with others now that you know more about yourself. Nothing is made or created by one person. You have to know who you are, and apply yourself to that team.
	Developed life skills	Students gained skills that they thought could help them in life, such as being more open to experiences, being able to think critically, and being able to take concrete action in their lives.	I think I have become a much more open person. I definitely used to dismiss people pretty quickly. I had this experience where I dismissed this person in the first week but I was going to be living with her. I didn't like her. I thought, I'm going to have to avoid her the whole time. But by the end, we were incredibly close. Through that process, I learned that stuff is not always as it seems. That should be obvious but I had to go through it to learn it.

Activities or Processes That Facilitated Transformation

Teachers. Students at semester schools tended to have different relationships with their teachers than they would at their originating school. Overall, the relationships were more egalitarian rather than authoritarian, with students addressing teachers by their first names. Students felt that the teachers made an effort to know them, which made it easier to ask them for help outside of the classroom. They said their easy relationships were a function of the time they spent together outside of the classroom, frequently discussing nonacademic topics as described in the quote below.

> Honestly having long conversations with teachers [changed me]. They were always pretty open. They were never trying to convince me. Which is exactly what ended up convincing me. We ended up having these long-winded, logical conversations about what we held to be true and why. By the end, their stance just made more sense to me . . . It was just really interesting back and forth that way. That is what ultimately changed my mind.

Students reported that the teachers appeared enthusiastic about being at the schools and were excited to teach their classes. At some schools, the teachers were younger and closer in age to the students than at their originating schools, which allowed the students to better relate to them. The teachers were seen as invested in the students, having high expectations for them, and pushing them to challenge themselves. Because the teachers knew the students, they could help them through challenges, which fostered trust between the students and teachers that allowed students to take more significant risks later in the semester. The teachers also encouraged students to be responsible for themselves and direct their own lives, which differed for some students from their home environment. These findings align with how students reported that support and challenge were important aspects of their relationships with their teachers in the quantitative survey.

Students. One of the essential characteristics of the student body was the fact that the students were all oriented towards the same goal and formed a like-minded cohort where they wanted to be at school doing the tasks assigned to them. Although the students all wanted to be at the school, they each had unique experiences and frequently held different viewpoints, which meant they exposed one another to diverse perspectives. The culture at the schools tended to be one where students supported one another with positive affirmations and where they were open and honest in communicating their experiences. Students said these behaviors created a safe and supportive environment that allowed them to engage in other challenges. That said, students did struggle with interpersonal conflict and reported that they found a lot of value in learning how to work through their differences.

The quote below provides an account of how being with a group of students with shared goals created a conducive environment for transformative learning.

> One of the first things was being around other girls and women who had the same mentality as you. They wanted to do more and be something different than the people at my high school. People at home don't change and are afraid of change. Being with the same people who have the same mentality as me, who want to travel, that changed me.

Reflection. Activities that required reflection such as writing and journaling assignments proved valuable because students had to articulate their ideas, often about their values and beliefs. They also appreciated time set aside expressly for reflection, which was difficult for some students who were uncomfortable with open-ended time without activities to fill it, and/or bored. But over the semester, many who initially resisted reflection came to realize its value.

> At first, it was hard to figure out what I'm going to do with these 2 hours on a Sunday. We went out to a spot in nature for 2 or 3 hours and only had a blanket and water and no books . . . I realized that I started to think about myself. I wouldn't force it. I would write about what was I feeling or doing naturally because I wanted to explore that. If I tried to force it, it wouldn't feel right, so I let it go naturally. I wanted to write about myself and my feelings and my life in that place book. Having to write my thoughts down was important . . . getting it on paper was useful and helpful for me. It was a way to get inner thoughts out.

Time for reflection was especially important when contrasted with full days with lots of activities, and it allowed students to make connections between old and new patterns of thinking.

School structure. Students found the structure of the school to be relevant to how they transformed. First, being away from home and, in some cases, being disconnected from technology limited the number of distractions and social pressure they experienced each day. They lived with other students, and faculty generally lived on the premises, which created continuity because they spent time together with faculty and students both in and out of the classroom. The living conditions led to a unique holding environment or social system for the semester's duration that allowed other processes to unfold, such as fostering deeper relationships between students and teachers. In addition, the schools offered unique experiences such as homestays in foreign countries, outdoor experiential education expeditions into the wilderness, and physical challenges such as running a half marathon. These experiences proved influential for individual students, each in its own way: Homestays provided exposure to other people, expeditions provided challenges and opportunities for leadership, and the physical challenges asked students to persist and complete a task that many of them never imagined they would do. The quote below describes how one student identified freedom, an element of the school structure, as being important to their transformation.

> The freedom that you're granted is a big part of it. There's "you need to be in class and show up for checks," but the time that is not specifically designated is really unrestricted for the most part.

Students did not identify the school structure as frequently as other aspects of the experience in the quantitative survey components, but the qualitative data revealed that it was an important part of the semester school.

Social. Social aspects of the semester schools included discussions, giving and receiving feedback, and validation. Students found it powerful to be vulnerable and open with one another, which they attributed in part to the discussions teachers initiated at the semester's start about difficult topics, such as privilege and racism. Students expressed dissenting opinions in the discussions and had to learn how to continue to engage with one another despite their varied perspectives. The process of giving one another feedback was valuable to them because it was challenging but potentially validating. Feedback created a contrast between what they thought and what someone else thought, which they then had to reconcile. Validation—where students shared their experiences and had them reflected by one another—was an important dynamic within the social environment.

> One of the first things we did as a semester is broke into little groups and did a talk about our identity . . . maybe I talk about this with my close friends but not really with 44 strangers. We dove right in . . . I thought it was real interesting because I had to think about how people see me and how I see myself. I think one thing that I realized is that I accept a lot more of how people see me . . . I identify more with that than with how I identify with myself. I think that people around me also felt that way too. . . . That was a start to the semester where we all got to share how we see ourselves and that helped people around me, and myself included, to see my peers as how they wanted to be seen. Throughout the semester, we talked more about parts of our identity like gender and sexuality and race and socioeconomic status. Socioeconomic status was a big thing that we talked about. It was also a really interesting conversation. It's not something we normally talk about.

Curriculum. While students identified specific aspects of the curriculum as important, they tended to discuss it less frequently than other activities. As commonly occurs in education, students may have been largely unaware of the curriculum, which contributed to them less frequently identifying curriculum as a contributor to their transformation. However, the curriculum was essential and often provided the content that they unpacked through discussions where, for example, the interpersonal dynamics proved difficult and potentially disorienting. The curriculum often gave them new ideas and activities to consider, whether it had to do with new topics, new ways of thinking, or new technical skills they learned. Novel content often was also challenging, and the process of overcoming challenges was one way that students learned about themselves.

Particularly at [my semester school], the English class we had there was very different from a standard high school class, and it was more challenging in the kind of thinking about why you're supposed to write in a certain way and thinking more about the content that you're reading deeply rather than just more menial surface level grammar and things like that. It influenced me in helping me think more about what I read. Not only what it's literally meaning but the meaning behind it and the context within when it was written may affect its implicit meanings.

Integration and Discussion

The primary purpose of this study was to consider whether the learning outcomes students reported at semester schools fit within transformative learning theory, and if so, to understand what qualities within the experience facilitated transformative learning. While our findings from the LAS suggest that adolescents experience aspects of perspective transformation at semester schools, we believe the learning outcomes only partially fit within either perspective transformation or the broader transformative learning literature due to their limited breadth, depth, and stability (Hoggan, 2016). For as significant or deep as the reported outcomes appeared to be for some students, the data in this study provided only preliminary evidence about how far-reaching and lasting the change might be, although it did seem that the semester school environment contributed to the outcomes. Adolescence in the United States is characterized as an inherently evolving stage of life where youth engage in periods of exploring potential identities before converging on one more stable identity (Seaman et al., 2017). Transformative learning, however, is defined by its irreversible nature (Hoggan, 2016), meaning that the educative experience imparts lasting change that cannot be undone as a student transitions between contexts, such as when they return home from a semester school. Thus, while student reports fit within the scope of perspective transformation, it would require more study across a longer time and multiple domains to state with confidence that semester schools can provide transformative learning to adolescents.

Students experienced most of Mezirow's 10 stages at their semester school, and most (95%) reported perspective transformation in the quantitative surveys. However, the qualitative interviews revealed that the students experienced formation more than transformation. Many appeared to shift from a perspective shaped by their primary caregivers to one that they were starting to define themselves with feedback from their teachers and peers. The transition they experienced shares some similarities in the self-authorship progression (Baxter Magolda, 2014). Students described identifying new values and uncovering the justification for old values, and gaining in confidence. Self-authorship occurs as a person turns to themselves as an authority in making decisions, an early step of which is gaining confidence (Baxter Magolda, 2014). A common thread within the student interviews was that they came to understand themselves, what they believe, and what they value in a way that brought them confidence, and allowed them to choose how they want to act in

the world. These experiences also parallel the identity formation process where youth explore and select or commit to aspects of their identity (Luyckx et al., 2008).

If the goal of transformative learning is emancipation, the students at semester schools indeed said they moved towards what they perceived as a more authentic version of themselves free of certain societal expectations. The process of undergoing the stages of transformative learning likely facilitated these outcomes. The semester school formed a learning community that was separated in time and space from home so that students could not depend on their existing social world to usher them through the experience. At each school, they experienced a temporary—and in some cases, extended—period without access to their phones and technology that would enable them to connect with their families and friends at home. Being disconnected was a novel experience as were many other dynamics at the semester school, such as living in a dorm with peers and spending breakfast through dinner in the company of the faculty who taught their classes. Students engaged in an experiential learning curriculum that helped them connect with the educational content, but the social dynamics that unfolded within the holding environment created at the school were also especially important. The curriculum and activities prompted students to question what they found meaningful and required them to articulate these ideas to other people. Many students mentioned how at home, they might silently disagree with an idea, but at their semester school, they had to speak up and express themselves to others because it was expected in the classroom. Having to share their thoughts was challenging but also affirming as they found other students listening to them, providing feedback, and participating in the conversation.

The literature on transformative learning has struggled with how to quantify or measure perspective transformation (Illeris, 2014; Kegan, 2000). Some articles describe perspective transformation as a rare occurrence and note that it produces dramatic changes, whereas others point to perspective transformation as being a slow process where people may change their thinking or frame of reference without actually changing the way they behave within the world (Baumgartner, 2001; Cohen & Piper, 2000). The processes a person undergoes in transformative learning are relatively clearly identified. But, while it is possible to create an environment where an individual may experience the transformative learning stages, a particular outcome—such as perspective transformation—cannot be guaranteed. In other words, while at least some of the processes must be present for transformation learning to occur, the process itself does not automatically lead to transformative learning. A teacher or school can design a class where students confront information that is likely to be disorienting, but whether the information is significant enough to produce a disorienting dilemma depends on the person, and cannot be assured.

While recent transformative literature typically does not consider transformative learning a binary experience (Hoggan, 2016), the LAS quantitative survey attempted to reduce perspective transformation to an either/or experience to identify potential students for semistructured interviews. We consequently assessed transformative learning before and after a semester school, considering those two experiences as

separate. Our data showed no significant relationship between prior transformative learning and transformative learning at a semester school, which is in part a function of the high rate of reported transformative learning at semester schools (95%). But splitting the previous and current semester as two independent blocks of time does not allow for the fact that transformative learning can occur over months or even years and that it has more to do with the extent of change than whether a change occurred. Students who reported transformative learning before and after their semester school may be deepening one episode of transformative learning, or potentially experiencing across multiple domains. However, the students who did not report transformative learning before their semester school but did afterward may have been exposed to a disorienting dilemma while at their semester school, and be in the early throes of transformation. Understanding what happened for students who reported transformative learning at their semester school but not previously will be important and could be linked to experiential learning. Their schools may have exposed them to activities that engaged them with new content that triggered a disorienting dilemma. Our goal was to interview students shortly after the semester school experience, so its effects would be fresh in their minds, and they could draw connections between what happened there and how it impacted them. However, allowing more time to pass before interviewing students would ultimately allow for a better understanding of the extent of each students' transformation.

Additional research on this topic would help us understand whether semester schools initiate transformation, whether they provide an environment for students to unpack their transformative learning, or both. If so, it raises questions about whether the enrollment process selects students who are already engaged in or primed for transformative learning. Such a finding would point to the importance of choosing the right students to explore transformative learning at their school. The opposite conclusion, that the semester school initiates transformative learning, would suggest that any student might experience transformative learning while in attendance given the right conditions.

Overall, the experiences students had at their semester school were profound and transformative in the sense that the experiences had a tremendous impact on the student and how they see themselves and the world around them. However, their descriptions did not typically include a shift in their frames of reference but rather a discovery of who they were and could become. If the instrumental mindset is one in which the individual is concerned with dualistic thinking, right and wrong answers, and the rules by which to live, students at semester students may have transitioned toward the socialized mind where they become better capable of self-reflection and considering their actions in relation to others (Stewart & Wolodko, 2016). Other students, who arrived further in their development, may have progressed to the self-authored mind but less so to the self-transforming mind.

The literature on transformative learning has pointed towards the importance of teachers who serve as guides and the importance of the student group, which our study also found (Cohen, & Piper, 2000; Mezirow, 1991). Students described their

relationships with their teachers as very different from what they experienced at their originating schools. The sense that their teachers were friends made them much more willing to ask for help and to have conversations outside of the academic realm. Of similar importance were the other students. In both cases, the depth of the relationships students had with their teachers and one another seemed to be a function of the nontraditional structure of the semester school. More specifically, the fact that students were separated from their families and lived with other students and faculty for 3 months strengthened their relationships. The curriculum at the schools provided the content that drove many of the conversations, whether it was the formal curriculum within an English class or the informal curriculum surrounding ethics and values.

It was interesting to note that students frequently named specific skills as a transformative learning outcome—they learned, for instance, how to communicate with someone who held a different perspective from themselves. The development of a skill does not fall within the traditional scope of perspective transformation, although developing skills is a specific stage en route to transformative learning (Mezirow, 2000) and can be seen as a behavioral outcome of transformation learning (Hoggan, 2016). The semester schools focused on communication as part of their curriculum, which is an activity or process that we found facilitates transformative learning. Therefore, the development of skills is something that can be intentionally taught by a school that would support transformative learning and that students identified as an essential step in their learning.

Additionally, there were two of Mezirow's stages that did not significantly differ between students originating and semester schools. The first one revolved around students who questioned but maintained their beliefs, which was equally likely to happen at semester or originating schools. The third stage where students question epistemic, sociocultural, and psychic beliefs also did not significantly differ. This finding may be because adolescents are inherently engaged in the process of questioning regardless of whether they are at home or a semester school.

Limitations and Future Studies

While the semester schools in our study share many commonalities, they each also differ significantly from one another. Some outcomes might be related to those differences rather than the overall semester school experience. Students served as their own control within this study because of the pre- and postsemester design. Consequently, we cannot know how much of their change we should attribute to normal development as opposed to the semester school experience. Semester schools attract a predominantly female population, which heavily biased our sample towards female students. The LAS is a coarse instrument, meaning that it is not sensitive to how perspective transformation (PT) can occur gradually; instead, it attempts to reduce PT to an either/or outcome. The first author interviewed students within 1–3 months of their semester schools, which may not have provided enough time for them to understand how their experience may have impacted their lives. One characteristic of

transformative learning is that it irreversibly shifts a person's frame of reference. Therefore, it would be worthwhile interviewing students a year or more later to understand how enduring the changes they experienced were. Finally, semester schools draw a population of students with higher socioeconomic status and most of whom are White. Students who do not share those demographic characteristics may have varied experiences that may or may not align with this study's findings.

Conclusion

Our study showed that semester schools provided an environment where students could engage in the processes that lead to transformative learning. It also showed that adolescents are capable of undergoing Mezirow's stages of transformative learning. Semester schools exposed students to transformative learning because of their structure, where students spend the entire day in the company of their peers and the faculty, and are away from home. The structure allows deep relationships to develop, a process that is also supported by the content that students discuss with students and faculty while at their semester school. While the outcomes students report fit within the scope of transformative learning, we did not have sufficient evidence of how broad or lasting the changes might be to confidently call them transformative learning. Thus, our findings suggest that semester schools create a unique holding environment for adolescents to undergo a powerful cycle of transformation that most commonly results in them understanding themselves, which in turn allows them to be more confident and have more agency in their lives. If these transformations hold over time, they might have experienced transformative learning, but if not, they might be better described as a cycle of identity formation.

ORCID iD

Lisa Meerts-Brandsma 🔘 https://orcid.org/0000-0002-9563-8220

Note

1. Although Mezirow (2000) referred to people as undergoing phases, K. P. King (2009) uses the term stage when describing the Learning Activities Survey (LAS). Because the LAS is central to the study's design, we chose to be consistent with King's terminology.

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Author Biographies

Lisa Meerts-Brandsma is an assistant professor at Weber State University where she studies the relationship between experiences, transformative learning, and identity formation. She teaches in the Outdoor and Community Recreation Education program.

Jim Sibthorp is a professor at the University of Utah in the Department of Health, Kinesiology, and Recreation. He has written extensively on topics involving outdoor education, adventure programming, and youth development.