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Students as (Intergenerational) Partners: Considering Time in the 4M Framework

ABSTRACT

Relationships in the students as partners (SaP) movement in higher education have been described as intergenerational, because students, staff, and faculty of various ages work collaboratively on assessing teaching and learning practices, co-designing curriculum, and conducting educational research. However, few studies have investigated age relations in the SaP movement. Drawing on the concept of the chronosystem, which brings attention to various definitions of time, we performed an analysis of three critical and interpretive qualitative studies to better understand intergenerational age relations in higher education, generally, and in the SaP movement, specifically. These three studies related to the scholarships of teaching and learning (SoTL) and the SaP movement and included a total of 26 individuals (eight students, four staff, and 14 faculty). We organized our findings into four themes. Theme one, "intergenerational ecosystems," captures the age diversity of different educational environments. Theme two, "individual and institutional changes of time," discusses how social change and changing academic cultures impact individual relationships. Theme three, "academia as a gerontocracy," describes the perception of older faculty/staff as holding more power in higher education. Theme four, "age, intersectionality, and belonging," examines intersectional ageism within post-secondary education. We discuss these findings in relation to the 4M Framework, which connects micro-meso-macro-mega levels of influence. We propose that the addition of the chronosystem to the 4M Framework may facilitate enhanced understanding of the meanings of age and aging in the SaP movements and post-secondary education.

KEYWORDS

students as partners; post-secondary education; intergenerational education; 4M Framework; chronosystems

INTRODUCTION

The students as partners [SaP] movement in higher education is said to employ intergenerational and democratic principles (Fielding 2011). This movement describes individual and institutional practices that support student, faculty (educators and/or researchers in post-secondary education), and staff (e.g., administrators, educational developers, and other professionals whose roles support the daily functions of post-secondary institutions) as they co-create teaching and learning activities (Holen, Ashwin, Maassen, and Stensaker 2020). Such activities include assessing

teaching and learning practices, consulting students on curriculum design, undertaking educational research, and engaging in the scholarship of teaching and learning (SoTL) (Healey, Flint, and Harrington 2014). Despite its intergenerational nature, few studies have investigated age relations in the SaP movement. This qualitative study aims to address that gap.

Context

Students as Partners and the 4M Framework

Scholars describe the SaP movement as a relational approach to engaging students and democratizing higher education (Fielding 2011; Healey et al. 2014; Matthews, Dwyer, Russell, and Enright 2018). Rather than students as passive consumers in higher education, the SaP movement advocates for students' active participation in their education by collaborating with faculty and staff on teaching- and learning-related projects and scholarship (Healey et al. 2014; Matthews et al. 2018). Collaborative relationships in the SaP movement are marked by reciprocity in the relationships between students and faculty/staff such that everyone equitably benefits from the partnership, shows respect for each other's contributions, and shares in the responsibility of the work (Cook-Sather, Bovill, and Felten 2014). Other democratic values espoused in the SaP movement are authentic engagement with partners and the learning process, the creation of inclusive and collaborative learning communities, student empowerment, trusting relationships, and sustainable partnerships (Healey et al. 2014).

In SoTL, from which the SaP movement arose, the 4M Framework is well-known. The 4M Framework connects micro-meso-macro-mega levels of analysis, or individual-programmatic-community/institutional-extra/inter-institutional levels of higher education (Simmons 2009, 2020; Walls 2016). Student, staff, and faculty partnerships can operate at any of these levels. At the classroom, or individual/micro level, a student, staff, and faculty partnership might co-design a curriculum (Gamage 2021). At the programmatic/meso level, partners may focus on co-creation of a program of study (Wonham and Derby-Talbot 2022). At the macro level, students may work as partners in university governance (Carey 2012). At the interinstitutional/mega level, a team might take a partnered approach to knowledge mobilization, such as sharing SoTL and SaP practices at conferences or in academic journals (Marquis, Black, Guitman, Healey, and Woolmer 2020).

Students, faculty, and staff in the SaP movement have traditionally been treated as homogeneous groups. Recently, scholars have increasingly considered how students, faculty, and staff possess diverse identities, abilities, and experiences (Marquis, Guitman, Nguyen, and Woolmer 2021; Mercer-Mapstone and Bovill 2019). This body of work points to increasing diversity among students, faculty, and staff as contributing positively to teaching and learning practice. Age diversity within collaborative partnerships is similarly an asset (Pitt-Catsouphes, Mirvis, and Berzin 2013). Fielding (2011) described partnerships in the SaP as intergenerational, suggesting that age diversity is inherent in partnerships within the SaP movement. Examples of age diversity in the SaP literature, however, are limited to mature, or older non-traditional, students (e.g., Cullinane and O'Sullivan 2020; Holmes 2020). Thus, age broadly remains undertheorized in the SaP literature, though it has been central to the literature underlying intergenerational education.

Intergenerational education

Intergenerational education involves people of different ages, typically from different social generations, learning with and about one another (Mannion 2012). Social generations are made of populations born within a similar span of time (Kunkel and Settersten Jr. 2021). Examples of social generations include Baby Boomers, Generation X, Millennials, and Generation Z. Each social

generation is often described in terms of transmitting and being governed by particular social norms, shared values, and experiences (Kunkel et al. 2021). Stigma can result when the values attributed to social generations conflict, such is the case in social media discourses related to "Boomers versus Millennials" (Meisner 2022). Intergenerational education is a well-established and effective approach to bring different social generations together with the aim of overcoming stigma, mitigating age discrimination, and reducing ageism (World Health Organization 2021).

According to Mannion (2012), intergenerational education involves reciprocal contributions and communication across generations for an emplaced endeavor. Similarly, the SaP movement is marked by reciprocity and communication between students and faculty/staff to support teaching and learning in places of higher education (Cook-Sather et al. 2014; Holen et al. 2020). Thus, the aims of intergenerational education and the SaP movement are aligned. Despite its intergenerational nature (Fielding 2011), there is a dearth of literature that theorizes age relations within the SaP movement. In order to advance our understanding of intergenerational age relations, this study draws on Bronfenbrenner's (1979) Ecological Systems Theory and the 4M Framework from SoTL. Specifically, we will argue that additional consideration and integration of the Bronfenbrenner's (1979) concept of the chronosystem and multidimensional definitions of time facilitates theorizing about the role of age and the interaction between people of different ages in the SaP movement and SoTL.

Theoretical approach

The 4M Framework was adapted from Bronfenbrenner's (1979) Ecological Systems Theory (Johnson and Ryba 2015; Simmons and Taylor 2019; Walls 2016). Bronfenbrenner's (1979) original work situated this theory in the field of aging studies and human development, but it has since been applied in many disciplines (Pitman Brown, Niles-Yokum, and Baker 2020; Wells 2016). The individual, including their myriad social characteristics, identities, embodiments, and lived experiences, is at the centre of the ecological system (Pitman Brown et al. 2020). The individual's interactions with their environment constitute proximal processes of psychosocial development (Bronfenbrenner and Ceci 1994). The ecological interactions in this framework are said to occur at five levels (Bronfenbrenner 1979). The first level, the microsystem (micro level in the 4M Framework), consists of people and structures closest to the individual, such as family, friends, and school. The second level, the mesosystem (meso level in the 4M Framework), consists of people and structures slightly removed from the individual, such as extended family or school administrators. The third level, the exosystem (macro level in the 4M Framework), consists of broader social systems, including neighbours and school districts. The fourth level, the macrosystem (mega level in the 4M Framework), consists of sociocultural influences that inform attitudes and ideologies, such as economic and political systems (e.g., capitalism and democracy). The fifth level, the chronosystem, consists of "how the individual and environment change over time" (Hinck and Davis 2020, 439). Later work distilled this framework into four essential components: the individual; the ecological context(s) in which the person exists; the process of person-context interactions; and multiple conceptualizations of time, such as historical time and the passage of time (Bronfenbrenner and Morris 2006).

Recent criticism of the 4M Framework states it is too static and that more flexible conceptualizations of the framework are needed (Frake-Mistak, Friberg, and Hamilton 2023). More flexibility might be further informed by elements from Bronfenbrenner's (1979) Ecological System Theory that are less represented by current models (Hinck et al. 2020; Johnson et al. 2015; Simmons et al. 2019; Walls 2016). Specifically, the current 4M Framework could draw more from Bronfenbrenner's (1979) concept of the chronosystem. The chronosystem draws attention to four conceptualizations of time borrowed from social gerontology. First, the chronosystem draws our attention to the passage of

time. At the individual level, the passage of time can be likened to "aging effects,' or changes that take place as one ages (Kunkel et al.2021). Second, a concept borrowed from Life Course Theory (Elder 1994), is the historical time in which an individual is situated (e.g., anthropocene). Also borrowed from Life Course Theory, the third concept is the timing of significant life events (e.g., high school graduation, marriage, retirement), which may adhere to or defy age norms (e.g., "traditional" versus "mature" students) (Dannefer and Settersten Jr. 2010). The fourth concept is period effects (Kunkel et al. 2021), which are significant events that have large scale social impacts (e.g., 9/11, Covid-19). When groups of people experience period effects at similar stages in their lives, these are called cohort effects and result in similarly aged people sharing similar historical and cultural experiences throughout their lives (Kunkel et al. 2021).

Consideration of the chronosystem would add flexibility to the 4M Framework; applying time-related concepts to the 4M Framework could elucidate the meanings of age and aging in post-secondary education. In the sections that follow, we will describe the methods of this study, share our results, and discuss our results in relation to Bronfenbrenner's (1979) concept of the chronosystem. In so doing, we will highlight the ways in which considering change over time may increase our understanding of age relations in higher education.

METHODS

Three case studies of SoTL and the SaP movement at a Canadian university informed our analysis (see Table 1).

Table 1. Characteristics of three case studies comprising the data set for this secondary analysis

Study	Topic of inquiry	Location	Year conducted
Study 1	Examination of student, faculty, and staff experiences of engaging in SoTL.	McMaster University, Canada.	2021
Study 2	Evaluation of the students as partners program.	McMaster University, Canada.	2021
Study 3	Exploration of student, staff, and faculty experiences of working in formal students as partners programming.	McMaster University, Canada with additional global recruitment.	2022

Study 1 focused on the value of SoTL at the McMaster University in Canada (Harvey, Suart, Cassidy-Neumiller, Karim, Minhas, Krone, and Evanovitch 2024; Suart, Cassidy-Neumiller, and Harvey 2023). Studies 2 (Harvey and McDermott 2023; 2024) and 3 (Harvey, Cerminara, Cooper, Do, and Hatzifilalithis 2025) centred on the SaP movement in post-secondary education. Study 2 evaluated a formal SaP program at the same Canadian university. Study 3 aimed to examine student, faculty, and staff relationships in the SaP at the same Canadian university, with theoretical sampling of participants external to the university. Studies 1 and 2 were mixed methods studies, made up respectively of an institution-wide and program-wide survey and interviews. Study 3 took a critical, qualitative approach to grounded theory analysis (Charmaz 2006). Semi-structured interviews from all three studies aligned with a critical and constructivist orientation to research (Braun and Clarke 2021).

We guided our secondary analysis with the research question: What meanings do post-secondary students, faculty, and staff ascribe to age within intergenerational partnerships? We believed this to be worthy of investigation (Tracy 2010) because there is little research that bridges intergenerational education and the SaP movement.

Data collection

We compiled interview transcripts from the three qualitative projects. Study 3 investigated intergenerational relationships between students, faculty, and staff in SaP programming. In their interviews, most participants stated that they had not thought about age when relating to partners prior to participating in the study. To eliminate the influence of bringing attention to age through the aim of the study and interview questions, we wanted to supplement our analysis of the interviews in study 3 with interviews where interviewers did not explicitly ask participants about age. As we conducted studies 1 and 2 prior to study 3, they did not explicitly include questions about intergenerational age relationships. Therefore, we decided to supplement the interviews from study 3 with studies 1 and 2 for this analysis. We only included the interviews from the original studies in our analysis. We did not include the survey data in our analysis on age-relations, because the specific aims of the surveys (SoTL and SaP program evaluation) were not relevant to our research question.

Participants recruited to each of the three studies were post-secondary faculty, staff, and students who had participated in SoTL and the SaP movement at a Canadian university. The third study also included global recruitment to compare perspectives outside of Canada (three participants) to those within the Canadian university (10 participants).

Table 2. Characteristics of three case studies comprising the data set for this secondary analysis

Study	Number of participants	Other characteristics	Disciplines
Study 1	8 total	8 faculty 4 women / 4 men Rank: Contractually limited teaching Appointment to full professor Age ranges from 20s to 60s	Arts and humanities, business, health sciences, natural and life sciences, social sciences, engineering.
Study 2	5 total	4 graduate students, 1 staff 4 women / 1 man Age ranges from 20s to 41	
Study 3	13 total	4 students (3 undergraduate; 1 graduate), 3 staff, 6 faculty 10 women / 3 men 12 Canadians, 1 from the United States, 1 from the United Kingdom. Age ranges from 20 to 50	
Total	26 total	8 students (5 graduate; 3 undergraduate), 4 staff, 14 faculty 18 women / 8 men	

To ensure we took an ethical approach to study design (Tracy 2010), the McMaster Research Ethics Board reviewed these studies and provided ethics clearance (#5390, #5539, and #5845). All participants provided consent prior to being interviewed. For this study, we compiled the de-identified transcripts from the 26 interviews comprising the three studies for secondary analysis of age-relations in student, staff, and faculty partnerships.

Data analysis

We analyzed the interviews following a reflexive thematic analysis approach since it facilitates a deep and thoughtful interpretation and analysis of the data (Braun and Clarke 2006, 2021). First, we read the data with attention to our research question in order to familiarize ourselves with the data. Informed by a critical and interpretive ontology, we next re-read the data and assigned initial codes. We wanted codes to reflect participants' experiences. Therefore, we took an inductive approach to initial coding, developing codes from the data (Braun et al. 2021). To ensure trustworthiness of our analysis (Tracy 2010), two researchers independently coded each transcript. Using multiple coders allowed us to propose codes that captured varying interpretations from the research team members and that provided a more nuanced interpretation of the data (Braun et al. 2021). To take a sincere and reflective approach to our analysis (Tracy 2010), the research team met as critical friends (Smith and McGannon 2017) to discuss codes and emergent interpretations of the data.

Working under the definition of themes as patterns "unified by a central idea" (Braun et al. 2021, 229), each researcher independently organized the agreed upon codes into themes. We then met again as critical friends to discuss our interpretations and decide upon our final themes. Then, to ensure credibility (Tracy 2010), each member of the team independently reviewed the themes generated from the data set to ensure we had grounded the themes in the data and that the themes resonated with the experiences participants expressed in their interviews (Braun et al. 2006).

Table 3. Themes identified in the data and their meanings

Theme	Central idea / How we defined the theme
Intergenerational ecosystems	Compared to earlier educational institutions in one's educational career, higher education is a space of increased age diversity as it comprises several ecosystems (students older than faculty/staff, students similarly aged to faculty/staff, and students younger than faculty/staff).
Individual and institutional changes over time	People, as well as the social institutions that are made up by people, change over time, which results in changing academic culture and relationships between students and faculty/staff.
Academia as a gerontocracy	Older faculty/staff are perceived as having greater power in higher education than younger faculty/staff and students of any age.
Age, intersectionality, and belonging	Ageism intersecting with other social identities (e.g., gender, race, and more) causes students, faculty, and staff to feel like they do not belong in certain educational spaces.

For the final step in the analytical process, we wrote the results, which is also an act of analysis (Braun et al. 2006, 2021). In writing our results, we considered the significance of our findings in relation to extant literature on the 4M Framework in SoTL (Simmons 2009) and Bronfenbrenner's (1979) Ecological Systems Theory. In addition, to ensure we undertook a rigorous analysis (Tracy 2010), we employed Braun and Clarke's (2020) evaluation tool for assessing quality analysis and writing of studies using thematic analysis.

RESULTS

Intergenerational ecosystems

Education, as a social institution, is made up of people spanning a large age range, existing within an intergenerational ecosystem. For instance, students often enter and exit primary, secondary, and (to a lesser degree) post-secondary education at similar ages. For example, children enter primary education at ages within a year of one another, as determined by their local school governance policies. As such, students' social relationships with peers are age restricted. When students within a particular class are generally close in age to one another, the intergenerational relationships within educational institutions are generally between (younger) students and (older) "teachers and profs" (Student 1, undergraduate age 20). These age gaps between students and educators are largest in primary education. As students approach and enter post-secondary education, age gaps may persist, but there is a greater likelihood that students will interact with educators who are closer in age to the student body. Still, higher education is made up of several generations ("my generation, right, but I know people who are like 15 years younger than me" — Faculty 11, full professor, 60s). Therefore, post-secondary students, staff, and faculty work as partners within a broader intergenerational ecosystem.

Shared social experiences, such as working as partners, can facilitate close social relationships between similarly aged people (Kunkel et al. 2021). In our case studies, traditionally-aged students mentioned this ("I think I connected more with other student[s]" —Student 2, graduate, 27), as well as faculty working in partnership:

> I'm probably on the younger end of most faculty members and . . . I've supervised students who are actually older than me. . . . I think in some ways it does create a bit of a closer bond. . . . I think that they see me maybe not as like a friend in real life, but they, they see me a little bit more like they feel that they can share more with me. (Faculty 1, assistant professor, age 30)

Seeing the limited intergenerational contact in higher education, Faculty 10 (part-time faculty, 40s) emphasized experiential learning in their teaching about aging so that students could have "real life [intergenerational] contact" with older people. This approach relied on bringing in older people from the community, but relationships between students, staff, and faculty can also be intergenerational. Such contact is vital for forming close intergenerational relationships, as was the case for one staff partner who remained friends with several former student partners: "we end up being like friends, so we still hang out after despite the age difference" (Staff 1, research coordinator, age 41).

With regards to bonding with people who were older or younger than themselves, participants shared several examples of successful intergenerational relationships formed because of their participation in SaP programming. Closer relationships resulted from sharing common interests and hobbies, life experiences (e.g., pandemic experiences), and pop culture references. In many of these relationships, participants did not consider age a salient characteristic or identity. When age differences between faculty/staff and student partners were revealed, some students reacted with surprise:

> [One student partner] had this realization, ". . . when you were a student, I wasn't even born yet!" . . . I don't take it as an insult . . . ." yes, I'm much older than you are." (Staff 1, research coordinator, age 41)

This student's realization may be because they usually had social relationships with similarly aged peers, with faculty and staff in more authoritative roles in educational ecosystems. However, the ability to foster a relationship of a different nature by working in egalitarian partnerships may support closer intergenerational bonds.

Individual and institutional changes over time

Ecosystems, composed of both individuals and institutions, change over time. With age, faculty and staff noticed a change in their social relationships with students. For example, Faculty 7 (professor, age 39), whose involvement in the SaP started as a graduate student and continued throughout the entire duration of their academic career, often had students stop by their office to informally socialize when they first started teaching in their 20s. In middle age, they noticed that fewer students came by to socialize and wondered if this was due, in part, to students' changing perceptions: "as you get older you become slightly more intimidating." They also wondered if the changing nature of the relationship was due to being at a busier point in their career, greater online interaction in higher education, and/or changing academic cultures, which they perceived as becoming more professional and formal than in the past.

Several other faculty mentioned changing academic culture: ". . . students come younger were educated in a different ecosystem" (Faculty 11, full professor, 60s). Faculty 2 (assistant professor, age 41) noted how changing academic culture impacted their relationships with student partners: "I tend not to socialize with students in general, just because I was trained in a bygone era . . . ." Other faculty and staff mentioned this bygone era as well, often when discussing the changing social norms they witnessed over time: ". . . social norms do shift over time. What was normal when I was 20 years old and what is normal for a 20-year-old now are—some things are the same, things are different" (Faculty 5, full professor, age 50). This faculty member cited changing communication norms: "texting became a really big thing, and that was just something that younger people did, and what you're seeing today is that even in the workplaces people are texting each other." As a result, Faculty 5 found themselves using the chat options in Microsoft Teams more frequently when communicating with student partners.

With the passage of time, some faculty and staff recognized that every year they "moved further away" (Faculty 1, assistant professor, age 30) from the lived experiences of student partners. In reflecting on higher education more broadly, Faculty 11 (full professor, 60s), mused that,

> [Research] basically tells us what our students are like in [a given year]. They're different from you; they're different from me. So, in many ways, . . . research . . . in education is never done because you're researching people and people change . . .

Some faculty and staff stated this was what drew them into the SaP movement; they aimed to better understand the lived experiences of being a student in today's sociocultural climate. However, some faculty denied that they were aging: "I'm always gonna be older than my students. . . . I feel as though once you get out of grad school . . .you stop aging" (Faculty 2, assistant professor, age 41). The implications of this way of thinking, that faculty and staff are older than students, is examined in the next theme: academic as a gerontocracy.

Academia as a gerontocracy

A gerontocracy refers to governance by older individuals wherein older people occupy leadership positions, often due to having more years of experience or by collectively aging within an

institution (Eisele 1979; Magni-Berton and Panel 2021). While higher education is often critiqued for meritocratic claims wherein people in power have earned their position based on merit or ability (Liu 2011), fewer scholars examine the ways in which higher education might resemble a gerontocracy (Neave 1985). Yet, faculty progress along systems of promotion and leadership based on years of experience, which correlate with time passed and chronological aging. At the student level, graduate students are generally assumed to be older than undergraduate students and are more likely to be offered leadership positions. This was Student 6's experience as a mature, graduate student in their 30s who expressed surprise and gratitude for the leadership role they were able to take on as a student partner.

Academia as a gerontocracy may not be discussed often partially because (older) age is stigmatized in society more broadly (WHO 2021). In academia generally, Faculty 6 (assistant professor, age 37) shared that, . . . "It's almost as if society has this view that getting old is associated [as] sort of a [air quotes] 'negative thing.'" Likewise, in the SaP, some partners did not want to speculate about age: "I don't want to say that the ages [of the faculty partner(s)]." (Student 5, graduate student, 20s). Old age being perceived as a negative caused some faculty to distance themselves from identifying as old: "Maybe I'll eventually get that old . . . I don't think I'm there yet" (Faculty 2, assistant professor, age 41).

The reason higher education can be described as a gerontocracy is that it is considered a norm for older people to occupy teaching and faculty positions while students are younger. Therefore, despite older age being seen as negative, participants perceived the academy as a gerontocracy:

> As you get older, you also tend to hold more power. . . . From a sort of cultural perspective, I find that as I get older, I am more confident in spaces, and I think because for me that power difference decreases because most of my peers, as I get older, are my age [laughing]. (Faculty 6, assistant professor, age 37)

Recognizing this position, Faculty 6 would try to decrease the power differential when working with relatively younger student partners. They often did this by inviting students to speak, especially when they were quiet at meetings. However, people from a variety of ages occupy student, staff, and faculty roles, and in some cases students may be older than some faculty and staff:

> It's this assumption that everyone in first year is 18, which might not be the case. . . . This might be someone's second undergraduate degree. This might be someone taking a gap year. This might be someone who came back to school after like 10 years of working. (Student 4, undergraduate student, age 21)

Stereotyping students as "younger" (with some faculty even referring to post-secondary students as "kids"—Faculty 11, full professor, 60s) fails to appreciate non-traditional, "mature" students' diverse experiences (Faculty 14, associate professor, 50s), which can undermine respect and reciprocity in student, staff, and faculty partnerships.

Age, intersectionality, and belonging

Ageism refers to age-based stereotypes, prejudice, and discrimination. It is estimated that half of the global population think, feel, or act in ways that are ageist (World Health Organization 2021). Examples of ageism include perceiving people to be too old and having stereotypes about younger or older people:

> I have experienced . . . "age-related microaggressions" over the years. . . . I have people just blatantly commenting on, "you're too young for this job." . . . why do I have to justify my age to prove that I can do this job? And that has bothered me quite a bit. (Staff 1, research coordinator, age 41)

Another student reflected on a stereotype about a faculty being younger. "The [faculty partner] is maybe more tech savvy and younger" (Student 5, graduate student, 20s) Experiences like these demonstrate how ageism based on one's real or perceived age can lead to feeling that one does not belong in certain educational spaces:

> You don't really get stigmatized if you're a fourth-year (student) in a first-year class . . . but I think older individuals who want to gain a degree after being. . . in the middle of their life. . . . [get] stigmatized. (Student 4, undergraduate student, age 21).

As a result of their age falling outside of expected age norms, older students are made to feel that they do not belong in higher education. This was the case for two mature graduate student partners (Students 2 and 7) who were excluded from some meetings; whereas, other partners (Student 6) saw their mature, graduate identities as assets to their partnership. Notably, given the ethos of partnership, the faculty and staff partners eventually included these student partners in the meetings from which they were initially excluded.

Ageism can intersect with other forms of oppression, including sexism and racism. When asked about the role of age in the SaP, participants emphasized the importance of an intersectional lens that highlights the ways in which individuals' experiences are impacted by their many identities (Crenshaw 2013). In terms of gender, Faculty 7 wondered if academic stereotypes favour older men over women regardless of age: "I think you can't look at [partnership] without intersectionality. . . . I think that older men are more traditional in higher education than perhaps older women or younger women." (Faculty 7, professor, age 39) This double standard of aging describes how ageism and sexism interact to disadvantage older women, while older men retain relatively greater social status (Sontag 1972). In terms of race and ethnicity, Staff 1 (research coordinator, age 41) shared:

> I get another comment saying, "you Asians always look young," . . . I have experienced that a lot. And then people say in a way like they're giving you a compliment. But I'm sorry, I don't perceive that as a compliment. (Staff 1, research coordinator, age 41)

It is important to note that both of these examples occurred in academic settings but not within the context of the SaP. Perhaps the closer bonds forged working in partnership mitigates such biases and foster belonging.

Participants understood the importance of inclusion and belonging, but felt that barriers remained:

> . . . there are still [barriers] whether it's from previous history or previous incidences that do, I think, impact the way we're able to contribute and participate and feel a sense of belonging. . . . (Faculty 6, assistant professor, age 37)

> . . . at the undergrad level I don't think I would necessarily feel comfortable cold emailing a professor about working together on a research project. (Student 5, graduate student, 20s)

Faculty 6 (assistant professor, age 37) believed that working with diverse partners could help mitigate age bias; ". . . a lot of us came from different races, cultures, gender, and we had representation at the undergraduate, graduate, and faculty level, and I think the diversity of our group helped minimize some [age bias]." Their assertion further supports the need to consider age alongside other social identities in order to foster more inclusive partnerships in higher education.

DISCUSSION

Through this study, we aimed to better understand age relations in student, staff, and faculty partnerships. We described our results in relation to intergenerational ecosystems, individual and social change over time, academia as a gerontocracy, and age and intersectionality contributing to feelings of belonging in higher education. In this section, we will relate these findings to the four levels of Bronfenbrenner's (1979) social ecological model and the 4M Framework (micro, meso, macro/exo, and mega/macro systems). We will then relate our findings to the Bronfenbrenner's (1979) concepts of the chronosystem in order to demonstrate how applying time-related concepts to the 4M Framework deepened our understanding of age and aging in post-secondary education and student, staff, and faculty partnerships.

The individual is central to Bronfenbrenner's (1979) social ecological model. Bronfenbrenner et al. (1994) conceptualized the individual as the student who interacts with the various systems and actors within the 4M Framework (educators and classmates in the microsystem, etc.). These systems in turn inform the individual's psychosocial development. The individual is made up of diverse social characteristics, identities, embodiments, and lived experiences (Pitman Brown et al. 2020). Individuals in this study identified with the social generations into which they were born and embodied sociocultural norms (e.g., Faculty 2 being trained in a "bygone" era). Individuals also spoke about their diverse lived experiences with regards to their intersecting identities, such as age and gender (Faculty 1), age and race/ethnicity (Staff 1), and age and status (Students 4 and 5). When these individuals come together in partnerships, considering age diversity is vital, considering people from different social generations may have difficulties relating to one another (Meisner 2022).

The microsystem is comprised of the structures and people closest to the individual, like fellow students and faculty who make up a SaP partnership, and the mesosystem is comprised of structures and people slightly removed from the individual, such as students in a larger program of study (Bonfrenbrenner 1979; Simmons 2009). Attention to age at these levels highlights the intergenerational ecosystems within educational institutions, which is replicated in student, staff, and faculty partnerships. Under the theme "intergenerational ecosystems," students spoke about forming closer relationships with similarly aged peers and some faculty spoke about students lacking intergenerational contact. Previous studies have concluded that age-diverse student and faculty relationships might mitigate ageism and age bias (Castro-Ceacero, Rodriguez-Gomez, Muñoz-Moreno, and Calatayud 2023). What was also evident under the "intergenerational ecosystems" theme is that students, staff, and faculty bonded, despite age differences, because of the partnered nature of their relationships.

The exosystem (macro level in the 4M Framework) comprises of broader social systems (Bonfrenbrenner 1979; Simmons 2009). In this paper, an example of such a social system is post-secondary institutions governance resembling a gerontocracy, whereby governance structures are

made up of older individuals (Eisele 1979; Magni-Berton et al. 2021). Participants in this study acknowledged the relationship between older age and increased power. The collaborative, reciprocal, democratic, and equitable relationships espoused by the SaP movement empowers students; it not only recognizes their contributions but their expertise they bring to partnerships (Cook-Sather et al. 2014; Healey et al. 2014). Therefore, the SaP movement has the potential to disrupt the gerontocratic structures in higher education by infusing voices of all ages into governance.

Some participants in this study associated older age with negative social perceptions, which might be partially due in part to the pervasiveness of ageism within the macrosystem (mega level in the 4M Framework). The macrosystem consists of the sociocultural influences that inform collective attitudes and ideologies (Bonfrenbrenner 1979; Simmons 2009). This study and others provide abundant examples of ageism and age-associated microaggressions within post-secondary education. For example, in a study of Spanish post-secondary faculty, Castro-Ceacero et al. (2023) found that younger researchers were more likely to devalue intergenerational relationships and espouse age-related stereotypes about older age. Thus, ageist ideologies in the macrosystem (mega level) may negatively impact age relations, but we did not specifically observe this within the context of the SaP.

The chronosystem draws attention to various conceptualizations of time, including the passage of time, which is correlated with chronological aging and "aging effects," (Kunkel et al. 2021). We covered this in the theme "individual and institutional changes over time." Herein, some faculty (Faculty 7) wondered if their changing relationships with students stemmed from their own aging, increasing the age gap between faculty's age and the average student age. More research on how faculty and staff partners experience SaP as they age would address this knowledge gap. Conversely, other faculty (2) saw their age as unchanging. Failure to recognize aging effects might contribute to faculty and staff believing that their experiences as a student are similar to students' experiences at later points in time. The SaP movement, however, recognizes that the experience of being a student changes over time due to sociocultural (e.g., globalism), economic, and technological changes that impact higher education (Cook-Sather et al. 2014; Healey et al. 2014).

Historical time describes the sociocultural time in which one is situated throughout their lives (Elder Jr. 1994). In the intergenerational post-secondary ecosystem and as discussed above, students, staff, and faculty are born in different historical times, and thus enculturated into diverse sociocultural norms. These in turn influence their experiences of being students, staff, and faculty. In higher education broadly, Martimianakis and Muzzin (2015) found that changing norms may contribute to generational differences in faculty's ontological and epistemological positionalities, thus influencing intergenerational relations with students. In the SaP, this study noted generational differences related to communication norms (e.g., texting in the workplace) and increasing racial, gender, and socioeconomic diversity within higher education.

Historical time also considers period effects, which are the impacts of significant events that occur during one's lifetime (Elder Jr. 1994; Kunkel et al. 2021). Period effects impact students, faculty, and staff of all ages. For example, the Covid-19 pandemic affected SaP programming (Harvey and McDermott 2024). It is possible that measures to curb the spread of the pandemic may have impacted older students in ways that differ from younger students (Homer 2022). As such, it is important to consider age when examining the impacts of significant events within higher education, generally, and the SaP movement, specifically.

Cohort effects are when groups of similarly aged people experience significant life events at similar stages in their lives (Kunkel et al. 2021). This was evident in this study's discussion of intergenerational ecosystems, whereby students often progress through their educational trajectories

at similar ages. Faculty also progress through career stages, but their entry into these stages depends on the age at which their careers start. Being that individuals age as they progress through these stages, higher education may be said to resemble elements of a gerontracracy. Little attention has been paid to higher education as a gerontracracy, but there has been recent attention to how political bodies might resemble this in the modern era (see Katz and Achenbaum 2024). Age-equitable representation in higher education means increasing the representation of younger people in governance (Schubert, Wiegele, and Hines 1987). The principles of SaP can be used to achieve more age-equitable representation, with students, faculty, and staff collaborating on academic governance.

Finally, this study also provided several examples of the (ab)normal timing of significant life events (Dannefer et al. 2010). One prominent example discussed by participants in this study is the stigmatization and exclusion of older learners. Indeed, some of the mature students in this study reported being excluded from some meetings, but their faculty and staff partners argued for the students' inclusion based on SaP principles. Turner (1987) theorized that ageism directed at young and old is due to a lack of reciprocity. A primary tenet of SaP is reciprocity. Thus, future research that looks at intergenerational reciprocity in the SaP movement and higher education, with attention to differences based on the (ab)normal timing of significant life events and other definitions of time within the chronosystem, could lead to a better understanding of the practices that mitigate ageism in higher education.

CONCLUSION

Facets of higher education, like the SaP movement, are intergenerational in nature. SoTL's 4M Framework shares theoretical roots with Bronfenbrenner's (1979) ecological systems theory. Drawing from the latter, this paper demonstrates that the addition of the chronosystem may facilitate a deeper understanding of the intergenerational make-up of higher education more generally and within the SaP movement specifically. Future research should aim to apply the concept of chronosystems and various definitions of time to better understand the dynamic changes to individuals, institutions, and broader social structures within systems of higher education and the SaP relationship in order to promote more equitable and age-inclusive academic institutions and partnerships.

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DISCLOSURE

The authors have no competing interests to declare.

ETHICS

The McMaster Research Ethics ethical review board approved this research (REB #5390, #5539, and #5845)

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