

The Educational Value of Alumni for Public High Schools

September 2019



Alumni Engagement Study

During the 2018-19 academic year, UC San Diego's Center for Research in Educational Equity, Assessment and Teaching Excellence (CREATE) conducted а multi-site study of efforts to formative. increase alumni engagement in San Diego County high schools. This report covers findings from 15 high schools (public and charter) that attempted to use their own high school alumni to provide career and college advising to their students over a sixmonth period. The study focused on 15 schools that used an online database called Alumni Toolkit to create 20 alumni events for students. These events ranged from small group panels around college and career advising to larger alumni-related events celebrating graduating seniors. Overall, the study collected input from 8 participating educators, 102 students and 34 alumni and conducted observations at the 20 alumni events. Data analyses revealed that all three qroups responded positively to their participation in creating, attending and participating in alumni events to benefit high school students. Educators found that putting on the events was easier because of the availability of the Alumni Toolkit as a back-end recruiting and sorting database. Students found they learned practical knowledge and gained motivation from interacting with alumni. The alumni themselves were pleased to have a chance to reconnect with their schools, or, if they were already connected, to continue their work supporting their home high schools. We conclude that high schools tapping alumni as an educational resource is a promising new strategy that may provide much at little overall cost. The following sections provide insights into the study's objectives and purpose, theoretical framing, methodology, data collected and results.

Objectives/Purpose

The specific aims of the Alumni Engagement Study were to examine: 1) the schools' initial implementation, 2) overall alumni use, and 3) potential near-term impact of the Alumni Toolkit. Alumni Toolkit is a webbased customer relationship management system designed to help public high schools engage their alumni as role models, volunteers and resource providers for their students' college and career readiness, and their schools' community engagement. But Future First USA the non-profit that launched the Alumni Toolkit intends for it to be more than an online toolkit for educators. Its purpose is to transform the practices of schools by creating alumni partnerships that provide educators and students with inspiring role models, diverse college advocates, and career partners that can improve the educational experiences of today's youth.

The study we describe in this report occurred during the winter and spring of the 2018-2019 academic year. As such, natural limitations exist as to the insights a six-month implementation and evaluation can reveal about the program's implementation, use, and short-term impact. The purpose of this report is to provide detailed findings from the pilot implementation and directions for future rounds of implementation/ scaling up and evaluation and research.

Theoretical Framework

In 2000, Robert Putnam published his book, Bowling Alone: America's Declining Social Capital, which discussed the fraying of social relationships, social trust, and civic engagement in American society. Now, nearly 20 years later, with the rise of social media as well as the growing, alarming divisions in American civil, economic and political systems, it seems increasingly important to focus on the potential benefits of building and re-building society's capacity to create, thicken and sustain positive social relationships.

Young people remain a key population to develop and study in regard to helping them cultivate positive social relationships. How young people form and foster stronger social relationships, their networks, if you will, can help inoculate them from potential isolation and could lead to greater social and economic mobility. This is especially true for young people who are the most isolated otherwise (Fisher 2018). While this concept of developing the networks of youth is growing in popularity, it is hardly a new concept.

Indeed, in 1988, sociologist James Coleman succinctly explained that while both physical capital (e.g. tools, buildings, etc.) and human capital were important assets (e.g. the embodiment of a person's knowledge, skills, etc.), social capital was a third important form of capital, one which resided in the *relationships* between people. Coleman (1988) argued that it is capital through the social found in relationships that human capital is developed. Works like Coleman's provide a theoretical basis for understanding why something like Alumni Toolkit. which facilitates the development of social relationships between high school alumni and students, can be useful assets in developing schools' and students' social capital.

What do we know about alumni engagement?

Alumni engagement in high schools is an understudied subject. Most of the literature is centered on college alumni and, because the decline in education budgets have prompted institutions to look into alternative sources of funding, primary interest gravitates around financial contributions. Studies of non-monetary contributions of alumni in college settings focus on **descriptive behavioral studies** about contributing alumni and the conditions under which they tend to engage with their former educational institutions, including incentives and obstacles for engagement (see for instance Weerts & Ronca, 2007).

Some of the questions that those conducting descriptive behavioral studies have sought to answer are:

- Who are college alumni donors and which ones are more likely to become non-mone-tary contributors?
- How do variables like income, gender, age, family size and structure, employment status, and lifestyle play a role to determine alumni giving?
- What incentives drive alumni contributions from a cost-benefit analysis?

Monks (2003) examined the individual characteristics that are correlated with alumni giving across graduates from 28 higher education institutions in an attempt to identify attributes and experiences of graduates who are more likely to make donations to their alma mater. Holmes (2009) for his part, used 15 years of detailed data on alumni donations to a private liberal arts college to explore giving determinants, finding that prestige and the possibility to deduct taxes from donations are strong determinants in giving, as well as living in proximity to the campus. McDearmon and Shirley (2009) also found that factors such as residential status, receiving financial awards and making donations to other charities have positive correlations with young alumni being donors to the university. Through a multiple regression analysis, they showed that an alumnae's overall positive experience at the university, being an in-state student, and giving to other charities are significant predictors of an alumnus making gifts to the institution.

Other research has found a strong relationship between collegiate alumni engagement with gender (Shaw & Taylor, 1995), lifestyle (Pentland et al., 1999), age, marital status and presence of children (Zuzanek & Smale, 2002), and participation in civic organizations (House, 1987; Miracle, 1977).

Non-monetary contributions are less often explored. Most of the interest lies in alumni volunteering as outside advocates and lobbyists to influence policy making in favor of the institution itself (Weerts et al., 2010), or to encourage (again from the outside) strategic improvements within institutions (Weerts & Ronca, 2008). These authors found that inclination to volunteer is associated with the quality of academic experience while an undergraduate student, beliefs about alumni volunteer roles, and number of degrees earned at the institution. Much less is written about direct alumni engagement inside institutions and impacting educational processes or programs, for a more direct alumni-to-student benefit.

A growing body of work examines higher education alumni working directly in schools

A small, but growing body, of work is starting to examine the usefulness of alumni working directly in schools with students, but still mainly at the post-secondary level. Most of these studies are exploratory research that examine the potential benefits that alumni engagement has on both communities and individuals (both alumni and current students) as well as the educational process itself. These works place particular interest on the impact alumni can have on higher education students, particularly from underserved communities, in terms of building a college-going culture among student communities (Warstadt, 2016), or how alumni themselves perceive contribute they (see can Johnson, 2017). They study the effects of volunteering on alumni who give their time and the impact of role models on students,

as well as the building of social capital for whole communities.

Similar to our work, studies in this area often examine a particular effort or initiative using alumni to improve an educational experience or outcome for students. For instance, one study examined how psychology departments in several Cincinnati colleges relied on alumni to provide relevant information to students about career options, fields, and jobs, helping them to develop meaningful professional direction (Lawson, 2017). Another study reviewed a "Smart Alumni System" (SAS) that paired information technology college students with alumni professionals to establish mentor relationships (Chi et al., 2012).

As we reviewed the literature on alumni use in K12 education, most important for our purposes, we realized we were in uncharted territory. **There is no research literature examining the systematic use or impact of alumni in K12 settings.** (Note: We did not search exclusively for research on the impact of active school foundations, some of which may be run by active alumni.) Therefore, the present study offers valuable early insights into a brand-new area of work (for schools and researchers) by examining the potentially significant impact that high school alumni could have as a free and readily available resource to help support K12 education.

Methods, techniques, and modes of inquiry

Early on in the design of this alumni study, the research team worked with the Alumni Toolkit developers to determine a methodological approach that would produce feedback and ascertain early impact. As the Toolkit had not yet been introduced to most high schools, the research team embarked on a partnership approach in order to determine how to best 1) introduce the Toolkit to the schools via early conversations, and 2) study the Toolkit in use at each school site.

The team studied the use of Alumni Toolkit through a design research approach, by initially working alongside Future First to introduce the Alumni Toolkit to superintendents, associate superintendents, directors of research, curriculum and instruction leads, principals, vice principals, counselors, and teachers, but later our research team gathered data and conducted analyses independently.

We used the approach of Design-Based Implementation Research (DBIR) because the relationship between research and practice was mutually transformative (Fishman et al., 2013). Throughout the process, the main components of the project, implementation, and research dynamically influenced each other. While research principles informed the steps we took in assisting high school administrators and teachers to test Alumni Toolkit, we used the implementation process itself (including variations, conditions and resistances) as data that allowed us to adjust, adapt, and inform our research.

Design-based research is well suited to making evidence-based improvements to innovations like Alumni Toolkit, in which "evidence from both implementation and outcomes informs changes that design teams make to innovations for learning" (Fishman et al., 2013, p.140). Along these lines, the tools we have developed to launch and study the Alumni Toolkit are designed to support local innovation and adaptation, as program participants provide input that will help shape the Alumni Toolkit (Cobb et al., 2003, in Fishman et al., 2013, p.140).

Once the district and school administrators approved the use of the Toolkit in their institutions, the research team **worked independently of the Alumni Toolkit designers** to examine closely **how**, **when and why** the educators at each site who had been designated to be early testers of the Alumni Toolkit made use of the Toolkit for their own purposes. What follows next are 1) a description of the types and subtotals of data collected by the research team from different types of respondents (via survey/interview), 2) the number of events observed, and 3) a brief description of the 15 participating high schools' demographics.

Data collection

Over the course of the six-month project period, a total of 24 high schools were invited to participate in the alumni engagement study using the Toolkit. Of these 24 high schools, 20 schools initially decided they would attempt to pilot the Toolkit. Of the 20 sites who expressed a desire to pilot the Toolkit, 15 school sites ended up piloting it before June 2019. By pilot, we mean that they ran at least 1 alumni-related event and/or recruitment event. Schools were free to hold additional events, but had to hold at least one during the 2018-19 academic year to be included in the pilot study. Events could be held jointly (meaning students from multiple schools could although attend) most were held independently of one another.

Among the twenty-four schools recruited initially to participate, none of the schools that left the project after initial recruitment did so because they were uninterested in the concept of alumni engagement or the Alumni Toolkit per se. Most did so because of competing time pressures or because they preferred to start using the Toolkit next academic year. In three cases, schools left the project because, while they wanted to increase alumni involvement, they felt the Toolkit was not a particularly good fit for their needs. One of these schools was a continuation high school where students rotate in and out frequently after short stays; another school had already launched a new alumni involvement effort using free,

lightweight tools such as a Google form/ Google sheets database, which they were reluctant to transfer to the Alumni Toolkit midstream; and a third school had access to a high-end alumni database used by universities.

In the end, the 15 pilot high schools included 10 schools from four school districts (Sweetwater Union High School District, Grossmont Union High School District, San Diego Unified School District, and Vista Unified School District), as well as five charter schools, including three from the High Tech High Charter Management Organization.

In total, the following data were collected:

- Alumni Events Observed: 20 events
- Alumni Interviewed: 34 alumni
- Educators Interviewed: 8 educators
- Participating Students Interviewed: **102** students

Data sources, evidence, objects, and materials

In the following section, we provide several important descriptions. First, we describe the high schools that participated in the study by providing school demographic information outlining the types of schools we studied. Second. describe participating we the educators surveyed after alumni events and their reaction to running these events. Third, we describe the alumni who participated and were interviewed as well as their responses to the experience. Fourth, we describe the demographics of the 102 student respondents interviewed after alumni events and the students' self-described experiences as

participants. Finally, we describe the types of events that occurred, and three case examples of events observed to give the reader a better sense of what happened at these events.

Participating schools demographics: All of the 15 participating schools enroll students from grades 9th-12th, with one enrolling 6th-12th graders. Collectively, the schools average nearly 1,000 students (991) per school site. The 15 participating schools also average 19 students per teacher, with approximately 61 percent of their students eligible for free or reduced-price meals. Altogether the 15 high schools enroll a total of 16,847 Latinx students, 4,571 White students, 1,043 Black students, 671 Asian students, and 173 Pacific Islander students. The 15 schools ranged in size from small high schools with 391 students to large, comprehensive high schools with 2,739 students.

Description of data collected from Alumni Toolkit study respondents

Educator respondents: Who were they?

A total of 8 educators were interviewed. Four were counselors or college advisors, two were teachers, and two were directors of their school's Career Center or College Advising Center. All were interviewed after they had run at least one or more events. Collectively, the educators interviewed reported that they had run 14 alumni-involved events this year (a few occurred before Alumni Toolkit had been introduced). All the educators were responsible for at least one alumni event that included:

- celebratory events towards the end of the school year
- alumni career panels
- Q&As about the college experience

Educators described their events' goals as aligning with Future First's goals of improving students' motivation and information regarding their high school education, and future college and career goals. Four educators recruited alumni as school and program partners. Three wanted students to "learn about jobs and careers", and two recruited alumni to "help students prepare for college." One educator had two goals: developing "role-models for social-emotional learning" and finding "funders for student services and teacher projects." Educators also reported that they ultimately wanted alumni to prepare students for life after high school, alongside more concrete goals for fundraising, building community connections, and helping students complete FAFSA (Free Application for Federal Student Aid) forms. All 8 educators said that their event(s) aligned with district and school goals. Finally, informal reporting of educators after school events indicated that all 15 high schools plan to continue to use and even increase their focus on alumni engagement next academic year.

Alumni Toolkit makes recruiting alumni easier

Of particular interest was the eight educators' recruiting experience when contacting alumni either through the Toolkit or separately. We were interested in the usefulness and user friendliness of the Alumni Toolkit. In general, the educators answered that the Alumni Toolkit was "useful" and "easy to use." One educator recommended that improvements could be made by allowing greater customization by school, including adding the ability to insert school logos into communication forms (e.g. emails, etc.).

The process was not perfect, however. A couple of educators also noted that even when alumni had completed the Alumni Toolkit survey and indicated a willingness to volunteer, they did not always respond to emails sent through the Toolkit or even from educators directly. As one educator said, "It was hard to get in touch with them, some want to come and some don't." Another educator reported, "I feel it is becoming more challenging with busy schedule[s], but since we have a tight community of 400 students our alumni are typically willing to help out if they are available."

Still, in general, the educators looked favorably upon the Alumni Toolkit as a resource for increasing engagement. Some of their remarks:

- "Current students are just beginning to create their accounts. So far it has been an easy process, I am easily able to see who has joined."
- "It's user friendly. You can scoot through. It was simple. They emailed me directly once I got them."
- "User friendly. Great."

Indeed, on a scale of 1 to 5 (1 being unlikely and 5 very likely), we also asked the 8 educators about their future intentions to use the Alumni Toolkit. Of the seven educators who answered the question: five educators responded with a "5", and the remaining one with a "4". Note, the one educator who skipped the question did state, however, that she definitely intended to run her event again next year and "expand it to the rest of the campus."

Notably, educators reported that using the Alumni Toolkit did in fact change the way they approached recruiting their alumni for interactions at the school. Some of the educators even focused on the future and talked about how next year their signing up of seniors this year would result in even more alumni to engage going forward. As one educator remarked, "We now have a place to go to reach them all at one time." And another stated, "We are just starting our alumni program. This gives us a jump start," although this counselor continued on, "there are a lot of other components needed."

Perhaps the key to the educators' enthusiasm was their students' reactions to the events the educators had held. Educators reported that they knew their students were "excited", "interested" and "engaged" during the events held. Educators were pleased with the turnout of students at events with optional attendance (outside of class time). For those educators we spoke with, the events they organized included students from freshmen to seniors, and, on average, alumni engagement events served 90 students apiece; the maximum size of the events organized by the interviewed educators served 130 students and the smallest event served a far more intimate 10 students. But regardless of size, the educators found value in these events for their students. One educator described her event as "a great opportunity. [It] provided real-life experience. So many [alumni] showed experience in the nursing world and [were] able to show students how it will be." Educators were excited because they saw their students learning and gaining knowledge, and sometimes even comfort, from the experience of interacting with alumni.

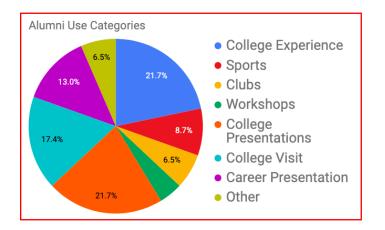
Alumni want to give back, reconnect and inspire

We also interviewed a total of 34 alumni who graduated in years ranging from 1955 to 2019. Out of the 34 alumni, over half were currently college students themselves (17), seven more were working in fields such as education or health, two were retired, and eight were in a diverse range of fields that included consulting, real estate, beauty and fitness. There were 13 alumni who identified themselves as White or Caucasian, 12 as Hispanic, Latinx or Mexican, two Asian or Pacific Islander, five multiracial, and two declined to state. When asked if they had volunteered in some capacity any time before at the school, 21 said yes, 13 said no, 1 person was both an alumna and a teacher.

When asked how were they invited to participate in the event, 8 alumni said they had been contacted by the school and 9 more had been contacted by a specific staff member or educator within the school. Six alumni said they were invited solely via the Alumni Toolkit and the rest were contacted via social media, face to face or through other organizations, including their school's alumni association. When asked if they knew about the Alumni Toolkit, onethird said yes; they were already acquainted with it and had positive opinions about it. Another third heard about it through the event organizers, and the final third had yet to hear about the Alumni Toolkit.







As part of the interviews, we asked alumni about motivation to volunteer their at their school. Alumni described the desire to give back and reconnect. Some also conveyed a sense of identity that linked them to both the school and the neighborhood and the desire to help, advise and/or inspire students. Several alumni said that they knew from their own experience how high school graduates are often unaware of opportunities available to them, and illprepared for college. By volunteering, they hoped help reverse these outcomes. to Example answers are below:

- "High school is hard, especially now. I come back because I can say 'I'm just a girl from [my community] and I'm making it.' It's important for them to know that I'm just someone just like them, and I'm making it. And my kids are making it too."
- "One of the reasons I keep coming back is that I get to connect with people (mentions a friend). It's awesome. I grew up two blocks from here and it feels like home. I know many kids and people have that connection to the school. I keep coming back to give back and create community."
- "I felt I wasn't properly prepared for college so I wanted to give them [students] notes on how to prepare."
- "Wanting to share with students the experience I had and hoping that I could help in-

spire or mentor another student."

- "I remembered when people came to talk to us and told us their experience. I remembered how one girl told us to always bring a pencil to the exam, because no one would share. It helped me go with a new mindset."
- "I remember how I felt in high school and think it would have been really inspiring for graduates to come back to tell us their success stories."

While there were some mild concerns about the organization and logistics of some events, most of the alumni had positive comments about the events themselves. Alumni reported to have had an enjoyable experience where they reconnected with old teachers and shared their life experiences with others. Some of their comments are listed below:

- "I was pleasantly surprised. I was thinking they weren't going to be that interested, but students were pretty attentive."
- "I enjoyed speaking to past teachers and students and catch[ing] up with peers."
- "Super cool, I definitely got a few students to take pamphlets and ask questions about what I do."
- "The students seemed enthusiastic and more so than the seniors I've talked to. They were more fun to engage in conversation."
- "It was very inspiring for myself, and I really enjoyed hearing what questions the students had."
- "It was awesome. I liked that everybody was asking questions.

The alumni roles at the events involved answering questions (6), participating in panels (6) and handing out awarded scholarships (4). One of the alumni said: "I felt like I was a first-person wikipedia. Overall, I felt my role was good. I didn't want to force my opinion on them, but [I wanted to give them] what they wanted to hear from my experience."

Perhaps most importantly, when asked if they would be interested in participating in a similar event in the future, all 34 alumni (100 percent) responded affirmatively.

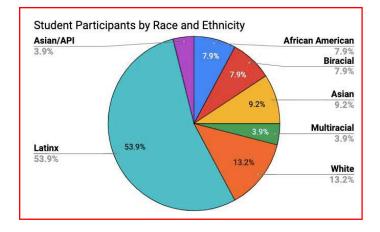


Demographics of the student respondents

The research team interviewed a total of 102 students during the pilot study. Student respondents were selected by approaching high school students who seemed 1) to be paying particular attention to the events/alumni speakers; 2) who had been observed speaking or otherwise interacting with the alumni during or just after the event and, in some cases, 3) who were willing or able to be interviewed when approached quickly just after events concluded. In a few cases, teachers who were organizing the events approached students they knew and requested that the students make themselves available to be interviewed. Also, in a few cases, the research team members in attendance were able to introduce themselves to all students in the room and state that any participating students could approach them afterwards to be interviewed. Interviewers also reserved the right to approach participating students after each event. Students were free to say no to interview invitations.

Student interviews typically took place right after the alumni events they had attended.

But, in a few cases, the research team returned to the school site a few days or weeks later to capture additional student interviews. At times, students were given a link to the student interview questions and the students were able to complete the questions themselves via a Google form with the research team available to answer clarifying questions as the students completed the form. Students who were interviewed or completed the Google form with research team assistance received a \$5 Starbucks gift card as compensation for their time. We recognize that this opportunistic approach to student participant selection for interviews may result in positive selection bias favoring Future First events. Next studies of implementations of Alumni Toolkit could remedy this with inclusion of a comparison group or random selection methodologies.



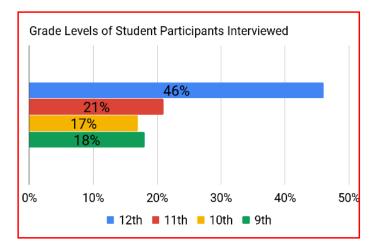
Alumni Toolkit events served a diverse range of students, with an emphasis on juniors and seniors.

The Alumni Toolkit catalyzed educators' interest in using alumni in educationally beneficial ways at their schools. Educators found the Alumni Toolkit easy to use. Alumni enjoyed the experience of being invited and sharing with students their knowledge. But how did the high school students experience these events designed to bring alumni back to their schools? A substantial majority of students (76%) who participated in alumni events reported that they gained new knowledge from the events and found them motivating as well.

The students we interviewed after their events were largely Latinx (54%), with the remaining percentages of students constituting a remarkably diverse group -- with nearly equal percentages identifying as Black or bi-racial, (ranging from 8% to 9%), and about equal percentages (13%) self-identified as White or Asian/Asian Pacific Islander (API).

Students interviewed after their respective events were more often completing their senior year. Seniors constituted about 46% of attendees interviewed at the events observed during the pilot implementation. Meanwhile, juniors (21%), sophomores freshmen and (17%) (28%) rounded out the other participants interviewed.

About half of students interviewed had previous experience with alumni at their schools.



Forty-six percent of students reported their schools previously held events with alumni in attendance prior to the program. **Students explained these events tapped alumni in college presentations and fairs, as coaches for on-campus sports teams, as volunteers at events, as chaperones, and with assistance**

for student projects in after-school clubs, i.e., band competition and engineering club.

Students were questioned about their post high school plans, which varied from pursuing a degree at a four-year institution to entering the job market immediately after high school. Six percent of students anticipate finding a job after high school. Sixteen percent of students want to enroll in a two-year college. Seventeen percent of students plan to transfer to a fouryear university after completing their General Education requirements at a two-year college and **60% of students plan to attend a fouryear college** after high school.

Students also expressed their opinions about the alumni present at the events. Eighty-six percent of student responses were positive in regard to the alumni interactions. The students described alumni in metrics of their perceived honesty, knowledge, relatability, and interest. Multiple alumni were described as "straightforward", "eye opening", "informative", and "motivated". When students provided negative feedback of the alumni it was in response to the content and interpersonal aspects of their communication style. Some examples are the relevance of information provided and if students found them intimidating: "...first guy was boring and the second woman was intimidating. Like i am not going to law school," and pessimistic in nature: "...kind of pessimistic but they made me see what college is truly about."

Counselors and teachers were students' link to learning about alumni-related events

When asked how they found out about an alumni event, 87% of students reported learning about it from a counselor or teacher. Of the remaining 13% of students, 3 responded that they had just "heard about it right now" while the other 7 had varying responses, including hearing about it from another student or their parent. Of the students who attended any alumni-related event we observed, about 58% did so because of a specific class in which they were enrolled, such as AP Biology and AVID. About 40% attended an event tied to college attendance, including the University of California, California State University and community college systems. A very small percentage (1.3%) attended an event linked to their future transition to a specific university (e.g. UC San Diego). Less than 1% of the students interviewed attended an event that was inclusive and open to all students.

Student experiences at alumni-related events: Fun, useful and interesting

The students we interviewed reported that the alumni engagement events were "fun" and "useful" and "interesting". They used words such as "comforting", "reassuring" and "motivational" when describing their experiences at alumni-related events that their schools had organized. Across the board, students from every high school and at all events reported positive feelings about attending events that highlighted alumni from their high schools. As one student reported after attending one event, "Yeah, I would do this [attend] again. My parents didn't go to college, so alumni can give the kind of reassurance that my parents can't. My mom went to cosmetology school, but no one went [to] college."

In their own words, students made comments such as:

- I find it very interesting to see that they are product of [my high school], and it's very inspiring to see them do things that we could potentially do.
- Because I felt like these people really did help me.
- I believe alumni events are very important

and I think it would be exciting to attend more.

- Because I like to interact with people that have more knowledge of things that may happen in the future for me.
- Yes, because it's good to hear other people's experiences to know what to expect.
- I liked getting information directly from people who have been through the college experience recently or are continuing through college.
- Yeah, I would talk to more alumni, because it was really comforting to know everyone is going through the same thing we are.

Indeed, 84 percent of students interviewed reported that they would be interested in attending a future event using Alumni Toolkit from their high school. The remaining 16% indicated that they might be interested, depending on the event being held. Only 1 student of 102 surveyed said s/he would not be interested in a future event involving high school alumni.

Case Example #1: Becoming a nurse: Getting the "real deal" from a high school alumna

At one high school, an annual counseling practice is for all counselors to interview all of their students in preparation for the upcoming year so that they can provide appropriate guidance in regard to students' subsequent schedules as they relate to the students' ultimate career goals. During the interviews with students, one counselor, Ms. S., had noticed a pattern among her students -- many of her students wanted to work in the health sciences in some capacity.

When contemplating how to use alumni recruited through the Toolkit, Mrs. S. quickly decided that she wanted to provide in-depth knowledge to her students around health careers, and specifically around nursing. The research team actually witnessed how when scrolling through the already-recruited Alumni Toolkit database, Ms. S. noticed right away the alumna working as a nurse at a local hospital, and she exclaimed how it would be great to get that alumna connected to her students so they could see in real-life how someone went from being a high school student at their very same high school to a nurse at a local nearby hospital, just like these students want to do.

Over the next couple of weeks, Ms. S. contacted the identified alumna, Elaine, who after graduating in 2008 proceeded to complete the nursing program at a local community college, and then her bachelor's degree at San Diego State University. Now Elaine works as a full-time nurse at a local hospital and part-time instructor for the California State University San Marcos nursing program. Ms. S. and Elaine quickly made arrangements for Elaine to come out to the school and meet with the students whom Ms. S. recruited to attend the nursing careers chat with Elaine.

Our research team observed the event that highlighted Elaine's path. Just prior to the event itself, Elaine explained to our team that she had not returned to her high school in any capacity before, but that she jumped at the opportunity when receiving an all-call email blast from her school via Alumni Toolkit to come help current students.

A group of 10 students, mostly young women, attended the nursing event. While the event itself was rather loosely organized and designed to be informal, Elaine came prepared, and provided a thorough presentation with visual aids, going above and beyond the call to action requested of her by the counselor.

Most interesting, when the high school students had an opportunity to ask questions, they focused on having Elaine unpack for them the daily life of nurses -- with a greater emphasis on what nursing is really like rather than the more typical information shared with students about course requirements or GPA requirements. Elaine provided important insights for the high school students about how it feels to be a nurse; indeed she refused to hide any gruesome or unsettling details. Elaine also explained in depth how the skills she learned in high school had prepared her for "adulting." As the students nodded along attentive and focused, Elaine also described the active role that resilience had played in her professional life. One student asked if anything had surprised her along her way. In response, Elaine urged the students to remove themselves from the notion of traditional career pathways and to "focus yourself on personal growth and gain valuable experience from entry-level and immediate jobs." As the students let this thought settle into their minds, Elaine posed another important question she wanted the students to carry away with them as future nurses: "Do you really care about these people?" By elevating the discussion with students to help them think about more than the nuts and bolts of becoming a nurse, Elaine helped them connect further to both the "why" of nursing and to develop a deeper understanding of life as a nurse. Elaine's time with the students was unlike typical career conversations available to high school students, especially at their school sites.

Afterwards, interviews with the student participants suggested that the event was a resounding success. All of the students found the event quite valuable and all requested more time with Elaine in the future. The question and answer period that lasted about 15 minutes was, in many ways, the students' favorite component of the event. It was where they could begin to see themselves as future nurses, and where they could have conversations with someone who had been, at one point, just like them.

Case Example #2: Career pathways: AP Biology to science and health careers

At low-income high schools in San Diego County, students are often bereft of college-educated adult role models who both look like them and who come from their neighborhood. Other than their K12 teachers, many may not know or have spent time talking to near-peers or adults who completed college, much less hold or are pursuing advanced degrees.

One AP Biology teacher, Mr. B., at one of the 15 Alumni Toolkit pilot high schools, decided to deploy the Alumni Toolkit to help remedy this. He arranged a meeting for 6 alumni to share their experiences in choosing the biotechnology/medical field as a career path with two different groups of his students. One alumnus was currently enrolled in the Icahn School of Medicine at Mount Sinai in New York and was unable to attend in person. The other five alumni in attendance occupied different positions that complemented each other: One alumnus was soon graduating from medical school at UC San Diego, two alumnae were pursuing different levels of career advancement in the field of mental health. One alumnus completed his degree at UC Berkeley to become a behavioral therapist, while another alumna is currently working on an undergraduate degree in Biotechnology at UC Berkeley. The alumnus not in attendance provided a pre-recorded video where he talked about his trajectory from their high school, to completing his pre-meds and a degree in Political Science at Yale University, to his current status as a medical student. The alumni present in the room also shared their trajectories with the students who attended the event.

When the approximately 40 current high school students filed into Mr. B's room, we noticed that all of them were of Latinx and/or African Amer-

ican descent, not surprising given the school's relative proximity to the U.S./Mexico border. Mr. B. reported that many of his students will be the first in their family to attend college, either in Mexico (where tuition is more affordable) or in the United States.

From the outset of the event, it was apparent that the high school audience was very engaged. After the alumni panel was introduced, there was ample time for students from the audience to ask questions and take notes. The student audience, eyes open and focused on the speakers at the front of the room (despite the 7:45 a.m. event start time during 1st period), peppered the panel with questions. Most of the questions revolved around admission issues, how to get into a good school, stress management, and specific technicalities and requirements of the admission process to medical school and health professions/undergraduate programs.

As the alumni spoke, it appeared that they were intent on being candid and, by doing so, connected well with the high school students. There were some emotional conversations. One was triggered when a student asked the alumni to identify a high school role model that helped them to accomplish their goals. Alumni mentioned several teachers at the high school as well as their family members. It became evident that in addition to the benefits obtained from the Alumni Toolkit, Mr. B. had clear expectations about the event and for the alumni's roles. Mr. B. had sent the alumni a short list of questions to help them prepare for the event and to know what to expect, which assured the event flowed smoothly and productively. After all the students' questions had been asked and answered, the alumni willingly shared their contact information with the high schoolers in attendance and encouraged them to stay in touch.

As we watched the event, we realized that we were observing, in real time, the school's and Mr. B's efforts to convey to their students the importance of building social capital while also building personal relationships with people with whom they enjoyed a shared history. In this way, these people were true role models; even better, they were role models from their high school who were currently chasing a shared dream: to enter the medical/biomedical profession.

Toward the end of the event, our team approached the high school students and the alumni panelists and asked them questions about the event itself and about the Alumni Toolkit. We learned that two-thirds of the alumni had indeed been contacted via the Alumni Toolkit, while the remaining one-third had a pre-established relationship with Mr. B. Nonetheless, all were equally eager to give back to their former high school now and in the future, and all saw the Alumni Toolkit as a useful vehicle to achieve that goal. Mr. B. is already planning additional events for the 2019-20 school year.

Case Example #3: Graduating seniors learning from alumni about transitioning well to college

On one of the first warm days signaling the summer to come, a research team member rotated through three rooms of soon-to-be high school graduates facing the last two weeks of their senior year. In any other context, the students might look old, tall for their age, or sophisticated, but as we scanned the room we noticed something else: We noticed wide-eyed stares, arms crossed in front of them, some slouched down and some leaning over intently, but all with a somewhat hesitant and mixed look of concern, uncertainty and teenage, dare we say it, interest? Anyone who has worked with seniors during their last two weeks of high school knows the challenge. The college applications have been sent and the admissions letters (or not) have long been received and answered, one way or another. Students at this point in mid-June know "where they are going." But do they really?

On this Monday afternoon, about 100 seniors at an Alumni Toolkit pilot high school were gathered in four rooms to listen, question and learn from students who had formerly attended their high school, and who had since left to attend post-secondary school somewhere else. Students listened to alumni who were now attending UC Berkeley, UC San Diego, San Francisco State University, Cal State San Marcos, San Diego Mesa College, and several private schools far from the state of California. In each room, about 20+ high schoolers listened to their near peers/now-college students, who were perched on stools and seated in woodenbacked chairs, or who stood in front of the very same classrooms that just one or two years ago had been their classrooms too.

As we listened to the presentations, and the questions and conversations prompted by these one-hour question and answer sessions organized by Mr. C., it was interesting to note the kinds of questions that young people were asking, which provided educators rare insight into what students were (really) worried about as they transitioned from high school to college.

High schoolers asked questions about making new friends, managing their finances, and identifying the "good professors" and the "easy classes." They asked questions about staying motivated, and freshman orientation (the value of going), and they asked questions about finding a job while in college.

The college students offered up answers to all

questions asked and, importantly, they did so using stories from their lives and those of other college students they know, their friends and peers at their now-institutions. One student told a story about not "clicking with his suitemates because they are all into gaming," which is not his "thing" and wandering down the hall to find another group of students who were more interested in going outside and being active. Another student offered up a story about how she found her work study job through online postings that colleges have, and the relative ease with which she was able to land work quickly. These stories, it was apparent, were meaningful to students as they listened and took in the information being offered, information was that was timely (from the year that just ended), relevant (because it responded to the students' questions) and trustworthy (because it came from alumni).

We also watched the alumni open up and offer up lessons learned using sometimes painful and surprisingly candid stories of their struggles. One young Latina spoke about her struggle after landing on academic probation during her first year in college. She hadn't taken seriously, she said, the need to stay organized and to turn in all her work on time, every time. She attributed this in part to the more easy-going nature of her supportive high school teachers (again, at the same high school), but related how her bad habits did not play out well in college. Fortunately, her story had a happy ending as she reported that she had since gotten a handle on her workload and had just come off academic probation a month earlier. Still, her story acted as a cautionary tale of both what dangers might lie ahead and ways to overcome them. As she confessed to the students, looking them firmly in the eye, "I got on academic probation my first semester. It happens to a LOT more students than you think." But she also offered words of encouragement, "Don't be afraid to fail. You can do this!"

The floodgates of information shared by alumni in each of the panels was impressive:

On mental health: "Protect your mental health. It's okay to take a break to recharge in college. Use the flexibility a college schedule gives you to take an occasional day off. Go to the gym, use all the amenities that your college gives you to protect your mental health."

On picking easy classes: UC Berkeley alumni says that "easy is defined by what the student is good at. One said he "knows a student who takes a chemistry course that is hard but the student never studies and gets an A, and then takes psychology and fails it."

On finding the best professors: "Use Rate My Professor to find the easier classes and the better professors." Another student mentions "CAPE scores," a ranking system where students evaluate professors -- "look them up!"

On changing your major: "I hope you guys realize, you can change your major. If you really don't like it, there is a reason for that. Changing your major is easy, and you can do it multiple times."

On the benefits of working on campus: "You can still get a regular job on campus; I know someone who works at the lounge, and you get \$13 an hour, and it's not too hard. You sit there for three hours and you're good. Library positions are good too because they are open 24 hours. Look for snagging a job where you are sitting down and answering questions, because then you can study at the same time."

On making friends and being safe: "I left the first weekend to go home and I found out that they all went to a party that weekend, and I thought 'uhhhh' [I should have stayed]. But, never leave alone from a party, stick with your friends."

Not all events are equally effective -- students seek closer connections

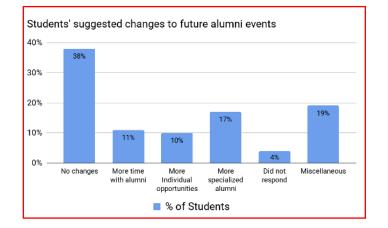
This is not to say that the students didn't have specific requests to improve events. Several students were clear: While they were interested in attending future events, they most wanted events that aligned with their needs and interests. They wanted to have opportunities to ask questions, including follow-up questions, of alumni. Fifty-six percent of students reported wanting a different type of event, ranging from specific-related alumni, like those playing sports, to broader needs such as more time with each alumnus. As one student said, "more questions, less presentation" was desirable. These students seemed to crave interaction with alumni rather than solely informational presentations.

Still, a substantial percentage (38%) suggested no changes to the event formats provided for them. Four percent of students reported liking the event format of a small group discussion.

Similar to the change in events, students also reported ways to make events using alumni more beneficial to them. While 38% of students stated they would not change the way in which alumni were used, the remaining 58% did report ways in which alumni could have been used in ways that prove more impactful.

- 11% reported lack of time spent with alumni.
- 10% reported wanting more individual opportunities with alumni.
- 17% reported wanting more alumni who were specialized and/or tailored to their needs and interests or from a broader range of fields. One student reported that, "having more alumni from my future college..." would be beneficial.
- 4% of students did not answer this question.

• 19% of students had varied miscellaneous responses including "not [to] do it during lunch...".



Learning new information from attending an alumni-involved event: Students most often reported that they felt they had learned new information about college, specifically, the transition to college, and relatedly key differences between high school and college. One student reported learning, "how alumni studied and how they prepared. I learned [about] new study techniques and habits."

Other topics the students mentioned they learned from the events included tips to better prepare for the SAT, the ins and outs of the University of California system, the differences in majors and ways in which to succeed in college. More qualitative answers included not stressing so much in high school, alumni's personal experiences, how important mental health can be during college, and more generally, what they are and are not looking for in a university.

In an interview with one student, the senior reported feeling extremely nervous and anxious surrounding the decision to declare his major. He had a wide range "of different interests," and was unsure of how to proceed. This student explained feeling like this decision would determine, "the rest of his life," and felt choosing a major would make him feel like he was missing out on something else. In his response to this section of the interview, he reported learning from the alumni presenters that, "it was ok to not settle on one thing and explore other interests," and more about the process of general education requirements of universities. He stated this helped ease inside him "some of the anxiety" that had been bubbling up.

Of the remaining students, less than 4% of students reported not learning anything new, less than 1% responded that they do not know, and 15% of students were unable to give an answer due to various other factors.

Implementation in busy American high schools: Limitations of a spring pilot

The alumni engagement study occurred during the late winter/spring of 2019. Attempting a pilot implementation initially across 20 high schools was an ambitious undertaking and the result was that we had actual implementation in 75%, or 15 of 20 high schools that initially agreed to participate.

In all cases, whether schools implemented the Alumni Toolkit or not, the schools were supportive of the idea of the Alumni Toolkit as a useful mechanism in and of itself for high schools to recruit and deploy high school alumni. Barriers to early implementation often rested in the overly busy schedules of educators who were charged with initial use of the Toolkit. For example, one high school Assistant Principal who pulled off an alumni event (but who we did not interview) willingly met with us to discuss his plans one afternoon. Within 15 minutes, he juggled: a student who was being arrested by local law enforcement, a parent who had come in with a concern, and the high school dismissal of 2,000 students, including school bus arrivals. Note: the Asst. Principal was still eager to get the

Alumni Toolkit going at his school -- and he did -- but he was exceedingly busy in his "day job" just running the school.

From our perspective, this study addressed many of the initial questions put forth regarding ramping up alumni engagement through the Toolkit. We were interested in 1) initial implementation practices, 2) overall use, and 3) near-term impact (based on qualitative observations and surveys of students, educators, and alumni).

Sustainability and scale: Future work on alumni engagement in high schools needs to assess **issues of sustainability and scale.** Do schools who initially use a mechanism like Alumni Toolkit continue and grow their use of alumni over time, in overall numbers (of alumni engaged, students impacted, and events/programs created)? Do schools (or even districts) continue to embrace engaging alumni year to year and over multiple years?

Mid- and long-term effects: What are the midand long-term effects on high school students who participate in connections with high school alumni? Do high school participants gain and retain knowledge, develop social capital, and most importantly, exercise that social capital in ways that connections with alumni better afford them over time? And can it be proven, via appropriate comparison groups, that students' social capital and the benefits of that capital grow as the schools' relationships with and effective use of high school alumni also grow?

Use of alumni beyond 11th and 12th grade students: Most of the events we witnessed targeted 11th and 12th grade students because of the time of year (late winter, spring) that the study was conducted. At this time of the year, high schools are often focused on their seniors' transitions to college or career. We learned much about the kinds of ways alumni can be useful to older high school students. But the study also taught us far less about the use of alumni with younger high schoolers, freshmen or sophomores. Consequently, we learned less about how alumni might be deployed as academic coaches, tutors, or more instructional supports in general with younger students facing down many more years of high school life.

Recommendations: When asked about the specific changes needed to Alumni Toolkit to make it better, educators recommended:

- Having a slide deck that educators could use at [community] meetings to explain Future First and the Alumni Toolkit, why educators want alumni involvement, and perhaps a video to explain the program.
- Adding a parent center where parents come in to help, if they are alumni.
- Getting more [high school educators from their schools] people involved.
- Allowing per school customization and better UX [user experience] for alumni.
- Integrating a larger alumni communication workflow as part of the system for educator users, within the internal interface. Replacing over time the simple sign-up system with a database.
- Internal[ized] or integrating actions with the alumni, because as of right now -- "it's just a tracking tool."
- Adding one (or several accounts) at an administrative accounts level that can manage everything.
- Including the alumni location in the profiles.

This last point, including some sort of mapping where alumni could input their primary location, was important because as one educator pointed out, reaching out to alumni to attend an in-person panel or host an internship for a present-day high school student was a waste of time if the alumni actually lived in another state or several hours away. In this case, the educator had emailed about 20 alumni looking for several panelists only to discover some lived out of state and were unable to attend.

Conclusion: The power of representation:

"If they can do it, so can I."

High school student attendee

The Alumni Engagement Study tested the idea of high schools' desire and ability to use their own high school alumni as an untapped resource for good.

The interview and observational data our team gathered and analyzed from 15 high schools suggests that the Alumni Toolkit acted as a catalyst that ignited high school educators to actively use high school alumni in ways that were ultimately impactful on high school students.

This is mainly because educators (even very busy ones) found the Alumni Toolkit user friendly and easy to implement. Although educators who used the Toolkit did request additional features be added to the Toolkit over time (see recommendations), they all embraced the idea of alumni use and felt that the Toolkit helped them be more efficient in using alumni effectively.

Observational and interview data and analyses of 20 alumni-inspired events and 102 student participants revealed how small group interactions in particular between high school students and their near-peer alumni powerfully addressed topics such as college transitions, career information, social emotional readiness and coping mechanisms. When asked, student respondents reported in overwhelmingly positive numbers (76%) that they had learned something new from the alumni-student interaction and, importantly, that they consider this information valuable. Only 4% of students felt that they had not gained new information.

Indeed, the data collected and analyzed revealed that the students found value in the words and stories of their high school alumni. The mantra: "if they can do it, so can I" was a frequent refrain from the high school student participants. Meanwhile, from alumni, a representative refrain was, "I remember how I felt in high school and [I] think it would have been really inspiring for graduates to come back to tell us their success stories."

On nearly all measures, educators, students and alumni reported that they appreciated the addition of an alumni focus at their schools to add value to their educational offerings. We conclude that **students by and large received two key benefits from attending alumni-engagement events: practical**

knowledge and motivation. HS students gained practical knowledge through alumni interactions. They could ask and get answers to specific, concrete questions that they had been worried about. They also benefited from motivation -- they could see, hear, and sometimes talk directly with people who had come from the very same classrooms and schools and who were "making it" out in the world. Students reported this boosted their self confidence and optimism that they too could achieve that type of success.

This initial alumni engagement study tested the ability of Future First USA specifically to launch the Alumni Toolkit in San Diego County high schools. Results indicate that educators are interested and indeed able to use the Alumni Toolkit to create powerful educational experiences for their students.

Future studies: If Future First USA intends to ramp up its work encouraging alumni use and

catalyzing K12 schools to tap their alumni for educational benefits, it may be worthwhile for Future First USA to consider the value of pursuing three next-level questions, along with continuing to document early implementation at continuing and perhaps additional high schools into a second year (2019-20).

- 1. What is the **value-added impact** of interactions between high school students and alumni, particularly the impact of repeated small group interactions between high school students and alumni?
- 2. How does alumni involvement change over time as schools tap them? Adding an **alumni-tracking component** to the website, one that helps schools keep track of which alumni have become active and what kinds of interactions they have had with students at the school over time, would be helpful. This would help track patterns of alumni involvement, including if alumni can be cultivated to move from initial site involvement, to regular site involvement, to organizational involvement (e.g. leadership, fundraising, etc.).
- 3. Given schools' tendencies to focus on juniors and seniors and use Alumni Toolkit for college and career advising, what are the more specific types of **practical knowledge and motivational advice** alumni provide students, and is this knowledge fundamentally different than traditional information providers (e.g. counselors, teachers, college advisers) and what is available online?

Research Team

Dr. Susan Yonezawa is a Project Research Scientist with the University of California San Diego's Center for Research in Educational Equity, Assessment and Teaching Excellence (CREATE) where she is also associate director. She conducts design-based research on student voice, youth engagement, and equity-minded secondary school reforms. She has published in numerous journals including the American Educational Research Journal, Educational Researcher, Journal of Educational Change, and Urban Education. She is currently PI for a \$2M Gates Foundation funded San Diego Math Network and a \$1M National Science Foundation grant called CS-CaVE (Computer Science: Creating a Village of Educators). She is the 2019 recipient of the prestigious University of California Systemwide Winston Doby Impact Award given to individuals who have made significant, lifelong contrithe University of California butions to system's education, diversity, and inclusion efforts.

Dr. Magalí Murià is an Associate Researcher, and has taught within the Communication Department at UC San Diego. She currently conducts applied research and qualitative evaluation with a variety of non-profit organizations, largely on educational and developmental issues. Previously, Dr. Murià coordinated evaluation research at non-profit organizations in Singapore and San Diego County, and managed field studies about education, non-profit capacity building and cross-border collaboration in several countries. **Damian Ruiz** is a graduate student pursuing a master's degree in Education at San Diego State University (SDSU) specializing in educational equity. Ruiz currently works at UC San Diego's Basic Needs center as the Off-Campus Housing Services Coordinator where he develops and evaluates programs addressing food and housing insecurity. Previously, Ruiz developed curriculum and lectured for the Cultural Proficiency Minor and Institute for Educators at SDSU. Ruiz has also worked as a staff researcher for the University of San Diego's School of Engineering, and UC San Diego's Center for Research in Educational Equity, Assessment and Teaching Excellence (CREATE).

Darian Beckstrand is an undergraduate researcher who holds three associate degrees from Cuyamaca Community College. After successfully transferring to UC San Diego, Beckstrand is currently completing her bachelor's degree in Communication and has just completed her third year at UC San Diego. Her previous work experience includes data entry in the private sector.

Ryan Jimenez is an undergraduate researcher who recently completed his third year at the University of California San Diego where he majors in Communication and minors in Psychology. Before joining this project, Jimenez's previous experience involved working in clinical settings with adolescents.

References

Bryan, J. (2005). Fostering educational resilience and achievement in urban schools through school-family-community partnerships. *Professional School Counseling*, 219-227.

Chi, H., Jones, E. L., & Grandham, L. P. (2012). Enhancing mentoring between alumni and students via smart alumni system. *Procedia Computer Science*, 9, 1390-1399.

Fishman, B. J., Penuel, W. R., Allen, A. R., Cheng, B. H., & Sabelli, N. O. R. A. (2013). Design-based implementation research: An emerging model for transforming the relationship of research and practice. *National Society for the Study of Education*, 112(2), 136-156.

Cobb, P., Confrey, J., di Sessa, A., Lehrer, R., Schauble, L. (2003). Design experiments in educational research. *Educational Researcher*, 32, 1, 9–13.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95-120.

Fisher, J. F. (2018). Who You Know: Unlocking Innovations that Expand Students' Networks. John Wiley & Sons.

Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28(1), 18-28.

House, M. L. (1987). Annual fundraising in public higher education: The development and validation of a prediction equation. (Doctoral dissertation, University of Florida).

Johnson, A. D. (2017). Tapping Into the Potential of African American Alumni of Urban Schools. *SAGE Open*, 7(3), 2158244017721732.

Lawson, T. J. (2017). Tapping into alumni as a source of authentic information and advice on careers in psychology. *Teaching of Psychology*, 45(1), 67-74.

Miracle, W. D. (1977). Differences between givers and non-givers to the University of Georgia annual fund (Doctoral dissertation, University of Georgia: Athens).

McDearmon, J. T. (2013). Hail to thee, our alma mater: Alumni role identity and the relationship to institutional support behaviors. *Research in Higher Education*, 54(3), 283-302. Monks, J. (2003). Patterns of giving to one's alma mater among young graduates from selective institutions. *Economics of Education Review*, 22(2), 121–130.

Putnam, R. D. (2000). Bowling alone: America's declining social capital. In *Culture and Politics* (pp. 223-234). Pal-grave Macmillan, New York.

Shaw, S. C., & Taylor, M. A. (1995). *Reinventing Fundraising. Realizing the Potential of Women's Philanthropy.* San Francisco: Jossey-Bass.

Warstadt, M. (2016). Transforming High School Learning Environment Through Alumni Engagement. (Unpublished paper, University of California San Diego).

Weerts, D. J., Cabrera, A. F., & Sanford, T. (2010). Beyond giving: Political advocacy and volunteer behaviors of public university alumni. *Research in Higher Education*, 51(4), 346-365.

Weerts, D. J., & Ronca, J. M. (2007). Profiles of supportive alumni: Donors, volunteers, and those who "do it all". *International Journal of Educational Advancement*, 7(1), 20-34.

Weerts, D. J., & Ronca, J. M. (2008). Characteristics of alumni donors who volunteer at their alma mater. *Research in Higher Education*, 49(3), 274-292.

Zuzanek, J., & Smale, B. J. (2002). Life-cycle and acrossthe-week allocation of time to daily activities. In *Time Use Research in the Social Sciences* (pp. 127-153). Springer, Boston, MA.

21