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Advisor and Student Experiences of Summer Support for College-Intending, Low-Income High School Graduates



Authored by

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ABSTRACT

Summer melt occurs when students who have been accepted to college and intend to enroll fail to matriculate in college in the fall semester after high school. A high rate of summer melt contributes to the lower postsecondary attainment rates of low-income students, in particular. This article presents qualitative findings from two interventions intended to reduce summer melt among low-income, urban high school graduates who had been accepted to college and indicated their intention to enroll. Results from student and counselor surveys, interviews, and focus groups point to a web of personal and contextual factors that collectively influence students' college preparation behaviors and provide insight into the areas of summer supports from which students like these can benefit. The data fit an ecological perspective, in which personal, institutional, societal, and temporal factors interact to affect students' behaviors and outcomes. A model of summer intervention shows that obstacles in completing college financing and informational tasks can lead college-intending students to re-open the question of where or whether to attend college in the fall after high school graduation. Given the pressure of concerns about how to actualize their offer of admission, students rarely engage in the anticipatory socialization activities that might help them make optimal transitions into college.

Problem and Theoretical Framework

Pronounced differences in college entrance by family income constitute a persistent driver of social inequality (Obama, 2009; Perna & Jones, 2013). By age 25, only 29% of U.S. youth from the lowest income quartile have entered higher education, compared with 80% of their peers from the highest income quartile (Aud et al., 2013; Bailey & Dynarski, 2011). Summer melt contributes significantly to this socioeconomic divide by reducing the rates of initial college enrollment among low-income students. We use the term "summer melt" to refer to the phenomenon of college-intending students failing to transition immediately to college, even after being accepted and choosing where to enroll. The overall national rate of summer melt across all socioeconomic groups is 10% (Castleman & Page, 2014a). Across a variety of contexts, college-intending, low-income students fall victim to summer melt at rates higher than the national average: anywhere from 20 to 44 percent of students in this population fails to enroll at any college in the fall semester after high school (Arnold, Fleming, De Anda, Castleman & Wartman, 2009; Castleman & Page, 2014a, 2014b; Daugherty, 2012; Matthews, Schooley & Vosler, 2011).



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This article reports on qualitative studies of an intensive advising intervention and a text-message-based intervention intended to stem summer melt among low-income college-intending students. Arnold, Lu and Armstrong (2012) have argued that progress toward the goal of improving college access for low-income students remains stalled because of a failure to account for the interactions among relevant personal, institutional, and societal factors. College access can be understood as emerging from a complex human ecology (Bronfenbrenner, 1974, 1979, 1993, 2005). Each of the intervention modes took an ecological approach by attempting to address the full range of circumstances that affect students in the summer after high school graduation. In a human ecology framework, students' pre-enrollment experiences and decisions are seen as taking place within their immediate settings and relationships: *microsystems*. Student microsystems contain their families, friends, and neighborhoods. In the summer after high school, students are largely or entirely separated from previous microsystems of school, teachers, counselors, and college access program staff. College microsystems are typically absent in the summer, as most high school graduates are not yet connected directly to particular college settings or people.

The *mesosystem* refers to the interacting connections among different microsystems; for instance, the intersections among summer intervention counselors, family, and loan organizations. Students have some agency in

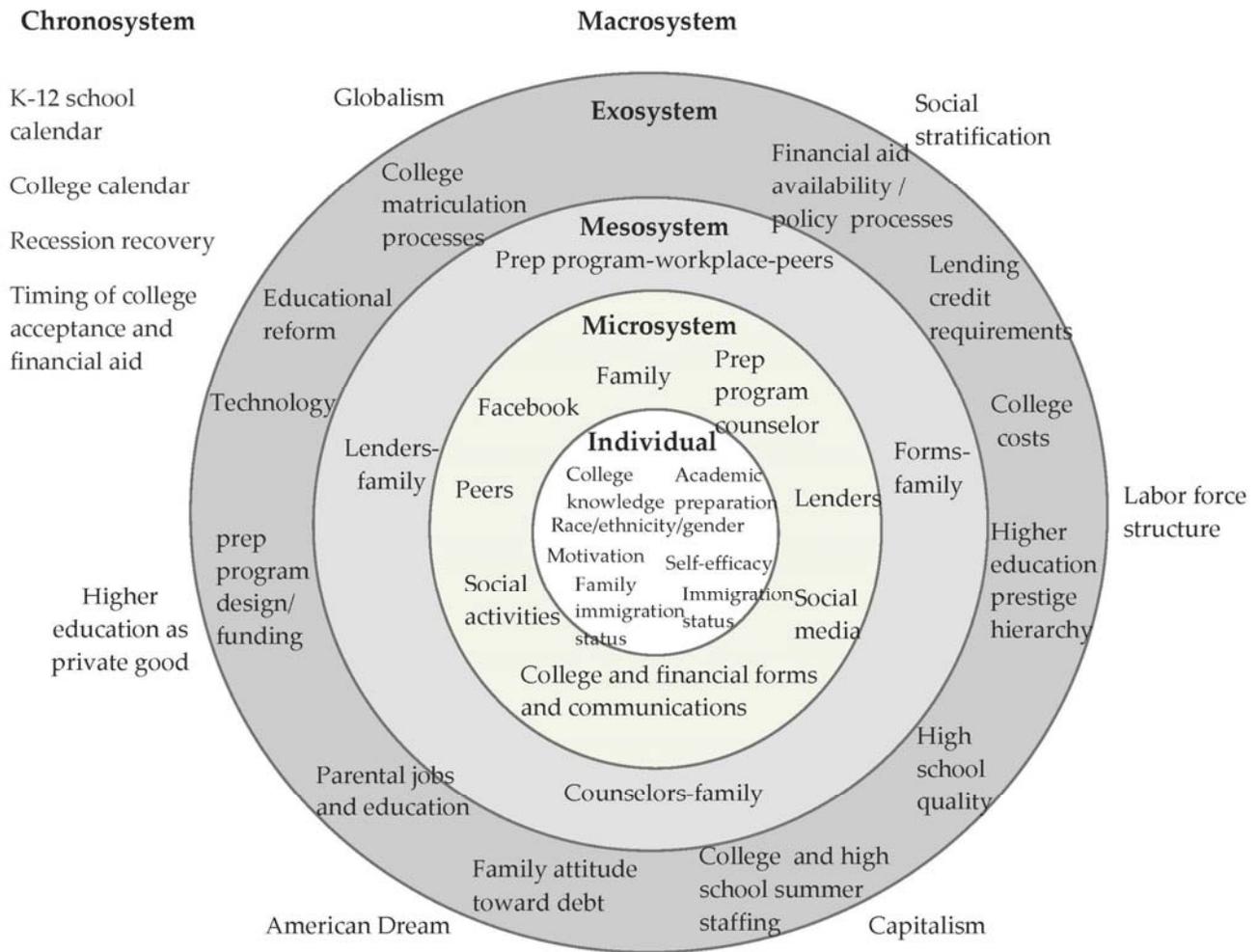
the ways they engage, interpret, and partially shape these individual (*microsystem*) and overlapping (*mesosystem*) direct settings. What happens in students' immediate contexts is also conditioned by more distant institutional and policy arenas in which they are not physically present (*exosystem*). Financial aid availability, immigration regulations, and parents' workplaces are examples of exosystem factors affecting students. The *macrosystem* includes broad social contexts, such as cultural beliefs or the capitalist ideology of higher education as a private good. The entire ecology also varies with time (*chronosystem*). Figure 1 (see page 8) illustrates this ecological model of the transition from high school to college with the most salient environmental factors that emerged from a comprehensive review of the literature on college readiness (Arnold, Lu & Armstrong, 2012) and our own empirical research.

Summer Melt: An Ecological Transition

For college-intending high school seniors, immediate settings (microsystems) of school, teachers, out-of-school programs, peers, and families form a congruent mesosystem. These microsystems collectively encourage college-going expectations and behaviors. The summer after high school, in contrast, constitutes an ecological transition in which new graduates are no longer immersed in high school and college access programs and have yet to connect to the college where they intend to enroll. College-intending students face challenging new microsystems after graduating from high school. Students fail to

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Figure 1: Ecological Model of College Readiness in the Transition from High School to College



Adapted from Arnold, Lu & Armstrong (2012).
The Ecology of College Readiness

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matriculate at their intended college, the research suggests, primarily because of financial and informational barriers they face over the post-high school summer (Arnold et al., 2009; Castleman, Arnold & Wartman, 2012; Castleman & Page, 2014b; Castleman, Page, & Schooley, 2014; Rall, 2013). Students encounter these barriers through new, unfamiliar microsystems in which they are placed in direct contact with college and financial bureaucratic systems. Over the summer, students and their families need to make financial decisions related to college costs and may need to take out loans to complete financial aid packages. They need to access, understand, and respond to college correspondence and bills. They must register for and attend orientation, take placement tests, arrange housing and travel plans, make course selections, and buy books. These requirements emerge from institutional and policy arenas in the exosystem. Many of these tasks are challenging, especially for families with limited financial means, English language literacy, bureaucratic savvy, or college experience. Furthermore, this array of tasks occurs during a period in which students are no longer working with high school counselors or access program staff but before they are connected to college faculty and advisors. In sum, summer melt can be understood as resulting from a pervasive ecological transition in which students face significant challenges in multiple microsystems at a point in time where key supportive microsystems have been withdrawn. These challenges emerge from exosystem policies and practices of financial

lending institutions and higher education requirements and costs. They also emerge from student exosystem factors such as federal regulations affecting their immigration status or the salary levels of their parents' occupations.

Method

Summer College Connect is a college access intervention developed in response to a challenging transition in students' ecology. Qualitative Summer College Connect 2011 and 2012 studies accompanied large-scale randomized controlled trials. In both years, school districts and community-based organizations collaborated with university researchers to provide assistance to low-income, college-intending students in the summer after high school graduation (Castleman & Page, 2014b, 2014c; Castleman, Page, & Schooley, 2014). Participants in each study included June high school graduates from urban high schools with high percentages of low-income, first generation, and minority students who indicated their intention to enroll in college in the fall.

Summer College Connect 2011

The 2011 Massachusetts experimental intervention consisted of summer advising delivered by uAspire, a Boston-headquartered non-profit college access and success organization that provides college affordability and financial aid advising to youth in urban areas in Massachusetts, Florida, and California (Castleman, Page, & Schooley, 2014). The 927 students in the sample were June 2011 Boston high school

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graduates who had been accepted to college and applied for a supplementary scholarship from uAspire. Divided randomly into treatment and control groups, the student sample was representative of the larger urban school population from which it was drawn, including 87% students of color and 74% who were eligible for free or reduced price lunch. While all students in the sample had indicated an interest in remaining engaged with uAspire by virtue of having applied to the scholarship, uAspire did not explicitly offer summer support as part of the scholarship application process. The results of this randomized intervention therefore generalize to other settings in which community-based organizations or schools offer support to all college-intending high school graduates, not just those who have signed up to request this support.

Trained financial aid advisors at uAspire contacted members of the treatment group to offer summer help, including reviewing financial aid letters and college bills, obtaining additional funding, and completing required college paperwork and preparation tasks. uAspire advisors used task lists that were customized for each college's requirements and deadlines to organize their counseling meetings with students and to provide guidance to students about important follow-up activities. Providing two to three hours of summer support cost \$100-\$200 per student and increased on-time enrollment rates by five percentage points in comparison with the control group (See Castleman, Page, & Schooley, 2014 for a full description of the

randomized controlled trial study's quantitative methods and findings.).

The qualitative portion of the study attempted to understand how students experienced and used the intervention by posing the following research questions:

- What is happening in the lives of students during the post-high school summer that affects their college transition behaviors and how they feel about enrolling in college?
- How is college affordability affecting students' feelings about college and their college planning? How does the intervention affect their feelings and behaviors about affordability?
- How do students and advisors experience what is happening within the intervention and perceive its effects on college transition behaviors and feelings?

To answer these questions, we conducted interviews and focus groups with the uAspire advisors who delivered the intervention and interviewed a subset of students in the treatment group. We used a purposive intensity sample (Patton, 1990) by selecting advisors who were identified by the site supervisor as the most experienced, capable, reflective advisors. Specifically, we interviewed four advisors in July, approximately three weeks into the intervention. Three of those advisors were interviewed again in late August, at the end of the intervention. We also interviewed an additional advisor and the supervisor of the

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intervention in early September. The majority of the 60 to 90 minute interviews covered in-depth narratives of eight to ten individual students from each advisor's caseload. Advisors were asked to choose students with whom they had met and whom they considered to be representative and/or particularly information-rich cases. For each of these cases, advisors shared their experience in contacting students, specific college planning issues they covered in advising, and the process and outcomes of working with the student. In the second interview, advisors provided updates on the same student cases. On both occasions, they were also asked to comment on student experiences and intervention issues more broadly.

In addition to these individual case-based interviews with advisors, we held focus groups in August and November with six to eight advisors and uAspire leaders. In each instance, advisors were asked to discuss patterns of student issues, reflect on summarized interview findings, describe the ways that they assisted students, and assess the intervention itself. The November focus group also served as a member check-in which advisors reflected on the validity and implications for practice of study findings and preliminary interpretations.

As part of the study, three graduate student interviewers with similar backgrounds to the study population conducted individual interviews with nine students from the treatment group. The purposive sampling

frame for student respondent selection was a maximum variation sample of students chosen to represent a variety of postsecondary plans and intervention experiences. The interviews covered students' summer experience as it related to college attitudes, plans, and actions; perceptions of college affordability; and reflections on the experience of working with a uAspire advisor during the summer.

All interviews and focus group discussions were tape-recorded and transcribed. Transcripts were entered into a qualitative research data analysis program (Hyperresearch). Data analysis followed a constant-comparative approach (Miles & Huberman, 1994) in which open codes are assigned to units of text and subsequently clustered into patterns and then into core themes.

Summer College Connect 2012

In order to test a scaled-up, low-touch summer melt intervention, Castleman and Page (2014c) designed a text-message campaign for a summer 2012 randomized control/treatment intervention. In Massachusetts, the study population included Class of 2012 high school graduates from the cities of Springfield, Lawrence, and Boston who had initiated at least two individual meetings with a uAspire financial aid advisor at their high school during their senior year. This operational definition of college-intending yielded a sample of 2,833 students who were representative of their urban school populations: predominantly of color (89-99%

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across sites) and low-income (78-89% as measured by qualification for free and reduced-price lunch). The sample was divided randomly into control and treatment conditions, with 1,070 students receiving the text message treatment. As with the summer 2011 intervention, students in the experimental sample did not select into being eligible to receive additional summer support from uAspire. Rather, uAspire identified eligible students from their own administrative records.

In the 2012 Summer College Connect treatment group, students received a series of 10 text messages that were sent directly to their mobile phones during the summer after high school graduation. The messages were personalized with the student's name and customized for each student's intended college. They reminded students of important tasks they needed to complete, such as logging on to their personal web portal at the college to access important information and forms, signing up for placement tests and orientation, filling out housing forms, and arranging health insurance. Messages also provided reminders about financial aid forms, understanding aid letters, and interpreting tuition bills. Students could follow embedded links in most of the text messages to access additional information and carry out tasks on college and financial aid websites. They could also request a meeting with a uAspire advisor by responding to the text outreach.

In Lawrence and Springfield, Massachusetts, where there is a deficiency of college planning

supports and resources for students, Castleman and Page (2014c) reported increased enrollment of 7.1 percentage points for students in the treatment group over a control group enrollment rate of 63%. In Boston, by contrast, where there is a high concentration of college planning supports, both during the school year and the summer following high school graduation, there was no impact of the texting intervention (Castleman & Page, 2014c). The cost of the treatment was \$7 per student. (See Castleman & Page, 2014c, for a full account of the intervention and experimental trial methods and findings.)

The qualitative portion of the study was designed to explore how students experienced the intervention, used the text messages, and considered their decisions about college in light of the messages. The research questions were:

- How do students experience and use text messages intended to assist them in completing college tasks during the summer after high school?
- How do students perceive the influence of text messages on their college-planning behaviors and enrollment outcomes?
- Why do some students who receive summer support choose not to begin college?

Qualitative study participants were a stratified random sample of treatment group students from Boston, Lawrence, and

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Springfield. In order to learn about the students for whom the intervention had not resulted in college enrollment, we oversampled students who were not in college in fall 2012 according to the National Student Clearinghouse StudentTracker. One hundred non-college students and fifty college students were asked to participate. We received responses from 41 students (27%) across these two groups.

In keeping with the digital intervention mode, data were collected in April 2013 via a short mobile phone survey (10-15 minutes, 32 questions) with a combination of forced-choice and open-ended questions about students' current activities, reactions to the intervention, use of the messages, and reflections about post-high school choices and plans. Students received a personalized invitation from uAspire to take the survey and were offered a \$20 gift card to complete it. It is important to note that students who sought out assistance might be more likely to report positive results than other students in the treatment group who did not take up the offer of support.

Findings

Summer College Connect 2011

The 2011 qualitative findings yielded themes about students' summer challenges related to postsecondary planning and themes related to the delivery of uAspire's summer intervention. Most importantly, the results show a high need for summer assistance. In one characteristic, comprehensive statement,

a uAspire student told the interviewer, "It's freaky. I'm the first generation in my family to go to college and I don't know what to do!" In fact, advisors found that students and parents were often unaware that colleges were sending bills and other information electronically. "It's not like they aren't sending the information at all or that they don't want the students to be informed," an advisor said. "They are creating these complex interfaces online. They are sending packets I'm sure. But something is getting lost along the way." This finding demonstrates an exosystem influence, as colleges move to online communications with admitted students without accounting for the level of college knowledge or availability of home computers among first generation students and their families. Chronosystem challenges arose as well. Colleges typically sent information about required summer tasks with an acceptance packet. The early timing of these instructions and their complexity led many students to put off summer tasks in favor of more immediate and pressing pursuits.

The Summer College Connect intervention design was a good match for students' summer financial and informational needs. In addition to their role as an important summer microsystem for treatment group members, advisors who had worked in students' high schools served as a mesosystem connection between high school and the pre-college summer. Students found their interactions with advisors to be comfortable and helpful. Advisors found that their financial aid

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expertise was always useful and frequently crucial in enabling students to implement their college plans or to make a new postsecondary plan. Students reported finding their meetings helpful and were particularly positive about “to-do” lists that advisors assisted in customizing to the tasks and deadlines of their intended college. The students who took up the offer for meetings found that the process helped keep them organized and on track. Even students who initially told advisors they were “all set” benefited from some assistance. As a student said, “I guess without [this program] I don’t think I would have survived this process. My family and friends have given me support, but not the support that I feel like [uAspire] has given me. I’ve had them walk me through the whole college process.”

The match between uAspire’s college affordability expertise and student need was particularly strong because the vast majority of work over the summer dealt with affordability and information related to finances. Struggles to afford college spanned the entire student ecology. From the macrosystem, students faced high college costs because of a steady rise in institutional expenses at the same time as declining state appropriations to higher education. The structure of the labor force and manifestations of social inequality were macrosystem factors affecting their family’s ability to pay for college. In the exosystem, loan policies, government regulations, and bureaucratic procedures all influenced the content, timing, and difficulty of arranging financing.

Students approached the array of financial tasks in light of the characteristics of their family and advisor microsystems.

The interaction between pressures emerging from distant levels of the environment and students’ tasks in their immediate contexts produced challenges for nearly all of the students. Facing first-year funding shortfalls from \$500 to \$18,000, students had trouble making sense of their gap. Many needed assistance in understanding that it was possible to fill a modest gap and others needed to be dissuaded from taking on large, unsubsidized private loans. Hands-on work during meetings was particularly helpful: going over award letters and bills, making phone calls to college financial aid offices, and completing required paperwork. Advisor help ranged from assistance in completing master promissory notes and health insurance waivers to appeals of financial aid awards and loan advising.

Students commonly faced unanticipated gaps or extra expenses that threatened to derail their plans. When combined funding sources did not cover college costs, as was often the case, advisors assisted students to consider alternative college options. This was the situation for a student who did not know the meaning of the term “trimester” and so did not realize until her advising meeting that what she and her mother took as the entire cost of her college year was just a third of her first year bill. Sometimes the financial aid award paperwork, the initial bill, and/or the real college costs were unclear to students and

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parents. While much of this confusion was due to families' limited understanding of complicated bureaucratic and financial forms, advisors noted that some colleges were occasionally misleading students by presenting inconsistent information about college costs on their website, initial financial aid award letter, or final bill. In other situations, students knew the costs but had no idea how to meet them. Many students faced both issues. "I thought I only had to pay \$600 after all those scholarships. But it turns out I have to pay another thousand, and [uAspire advisor] helped me realized that. And I was 'So what do I do? What do I do?' And she was really helpful."

Students were dealing with numerous problems that were intertwined with affordability. Attempts to finance college occurred within mesosystem interactions among the contexts of advisor, family, peers, and community. As an advisor told us: "Financial aid is the biggest issue, obviously, because it comes from other issues. They'll all connect, but at the end of the day, you can't even begin to address those things unless you address those emotional or other issues that are going on that are not so much [about] money or filling out the form." Family issues, in particular, often determined whether students were able to implement their postsecondary plan. Parents' beliefs and actions sometimes hampered their student's plan, for instance by an inability to provide financial information or a cultural reluctance to have their child live on campus. Family issues like these were sometimes crises that

necessarily became the focus of advisor assistance. Other families were supportive but unable to help; some were actively helpful; and some dominated the student or pushed hard for high-debt college choices. Violence in inner city Boston over the summer led some families to increase the priority of college and to make additional financial sacrifices to enable their student to leave the neighborhood for college.

All interviewed students felt their advisors cared about them and were open and receptive to anything they brought up. Every advisor reported acting as a personal counselor on occasion. However, apart from family problems related to financing college, student and advisor concerns about personal issues, academic readiness, and strategies for thriving in college were almost always set aside in order to focus on paying for college. The intervention necessarily concentrated on helping the student matriculate into college. For this population of students, financial and logistical tasks were the most salient issues in the transition to college. This work took priority all summer. Advisors had little time to take up academic, emotional, and socialization transition issues that might influence college success once students were enrolled.

Another challenge for summer program advisors was the significant tension between encouraging all students to pursue the goal of college and pushing many students to understand that their specific plan was unfeasible. Many students had strong

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attachments to particular campuses and to the idea of themselves at a four-year college. These ideas came from the macrosystem and exosystem messages about the American dream and the normative college experience in the U.S. generally, and in the Boston higher education context. Students had encountered these social ideals in their microsystems via high school messages and norms, family ideals, peer attitudes, college recruitment, and self-concepts related to college-going. For the many students with insurmountable gaps between their financial aid and the cost of attendance at their intended institution, advisors encouraged them to consider community college or a less expensive four-year option. Students varied in their response to these suggestions, with some resisting what they saw as a less-desirable or lower-status option. Some advisors pointed to the difficulties of serving as the realist at the end of a line of adults who have assured students that they can achieve anything if they work hard and desire it enough. Notably, many students expressed a belief that the finances would “work themselves out” as long as they were accepted to an institution. Helping students manage and sometimes reset their expectations was a major theme in the uAspire work. In the words of one advisor: “I was playing the role of dream crusher.”

Given the high need for assistance among the study population, it is perhaps surprising that a major finding of the Summer College Connect 2011 qualitative study was the considerable time expended on persuading students to take up the offer of assistance. A

major frustration for the advisors was the difficulty in reaching students and scheduling meetings. Students routinely ignored phone calls, voicemails and emails and frequently canceled or failed to show up for scheduled meetings. Timing of the meetings during the workday was difficult for many students, as was the trade-off between an advising meeting and foregone pay from taking time off of work. For some, the unfamiliarity or travel time to downtown Boston proved to be obstacles. Although at least one advisor had reasonable attendance at off-site meetings, most were hesitant to risk no-shows, especially on evenings and weekends. While offered, the incentive of department store gift cards did not seem to make a major difference in students’ receptiveness to the offer of help. One advisor said that everyone was “stunned at how hard it was going to be to track down students...We just had no idea how much effort it was going to take.” The difficulty in reaching students and setting up meetings was related to advisors’ sensitivity to the balance between helping students take responsibility for themselves and fostering dependency by “holding their hands.” “It’s hard, you know,” an advisor said. “You don’t want to be stalking the student!”

By the end of the summer, advisors had exchanged a phone call or email with 80% of the treatment group. Fifty-one percent had met at least once with a uAspire advisor. Students’ willingness to accept the offer of advisor support increased dramatically toward the end of the summer, as students faced deadlines to pay their first bill and

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finalize their loans. The late surge of interest in advising also appeared to be related to adolescents' strong bias toward the present. Many students put off enrollment tasks until there a very strong sense of urgency to complete them finally dominating other immediate concerns and pressing tasks. For ethical reasons, the control group had been informed during their last month of high school of the availability of summer help; however, only 2% sought out support from uAspire. Clearly, active outreach was necessary to mobilize students to take up the offer of summer support. The reasons for the lower take up rates earlier in the summer are not entirely clear, but advisors agreed that many students perceived that they were "all set" after getting accepted to college and graduating from high school:

In the early summer, they don't yet realize that they're not all set. So, I think that early summer is still kind of the honeymoon period of 'I just graduated and I'm all set to go to college. I was accepted, I paid my deposit, and now I just get to do what, you know, whatever my summer brings until September... I mean, if someone's calling you unexpectedly during the summer, and you don't feel like there's anything pressing, then you might see it as, you know, a nice offer for help that you don't need to take up (uAspire advising supervisor).

Advisors agreed that students and their families did not foresee the college tasks of

summer or the full realities of the costs related to college attendance. By the time some of them realized the seriousness of the tasks, they were unable to finance their intended college.

The focus on finances and informational activities precluded students from using the summer to prepare for the role of becoming a college student. Anticipatory socialization is the process of learning about and beginning to adopt the values and norms of groups that non-group members hope to enter (Merton, 1968; Weidman, 1989). Given the pressure of financial and informational concerns, few Summer College Connect students were able to have conversations with their advisors about, choosing courses, finding and using campus resources, connecting with future classmates, dealing with academic weaknesses, affording books, and other transition issues. These are the kinds of anticipatory socialization issues that generally occupy the pre-college summer of high school graduates from higher income, college-educated families (McDonough, 1997; Wartman & Savage, 2008). Such preparation is likely to affect the smoothness of the transition into college and, arguably, college persistence.

Summer College Connect 2012

The 2012 Summer College Connect intervention turned to automated text-message based communication to reach out and offer summer support to students. The motivation for this strategy is twofold. First, automated outreach reduced the advisor time

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and expense in tracking down students and persuading them to accept assistance. Second, advisors had found text based communication to be effective for reaching students during the school year and in the prior summer's implementation of Summer College Connect. In addition, text message outreach is cost-effective, scalable, and relevant to the digital lives of young adults (Castleman & Page, 2014c). In this treatment condition, students actively chose to pursue information or seek advising by responding to at least one of the automated messages received (34%-48% depending on city) or by taking up the text invitation for an advising meeting (20%-31% across cities).

The qualitative study of the 2012 text message campaign used a survey delivered via mobile phone to follow the outcomes and evaluate the intervention experiences of treatment group students eight months after the end of the message campaign. The report of results begins with examining the third of the respondents who had not begun college after high school. As in the 2011 study, the entire student ecology was implicated in the host of issues they gave for postponing college. Students' reasons for not matriculating related to a variety of financial issues, including needing to work to help their families, not wanting to take out loans, missing financial aid deadlines, and feeling they could not afford college. A few students missed application deadlines or did not get into the schools they wanted; one still needed to finish a failed high school class. Others had competing interests: "needed a break," "was

enjoying my job," "wasn't interested." Only one student expressed feeling academically unprepared. In keeping with the 2011 study, 2012 graduates' consideration of academic preparation issues was overshadowed by the effort required to pay for college and complete required paperwork.

An important reason for studying students who do not attend college is to find out whether they are, in fact, successfully pursuing routes to upward mobility outside of higher education. It was not the case that students in this study skipped college to enter other potentially high-wage career ladders. Instead, the pattern for respondents who had not enrolled in college was one of unstable employment and unskilled or semi-skilled jobs.

Across the sample, 96% of respondents in and outside of college had worked full time at some point in the nine months since high school graduation. By April, however 46% of college and non-college respondents were unemployed and looking for work. Of those employed, only the few enrolled students with college work-study jobs and a single individual with an internship could be seen as pursuing career-related work; the rest of the group was employed in food service and retail positions. The group was somewhat satisfied with their pay and work environments but not with the connections of their job to their interests and desired career.

Students varied greatly in their response about whether they would make the same

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decisions about college again. Almost half of the group said they would make the same choice again about whether and/or where to enroll (definitely yes: 24%; probably yes: 24%); the remainder would not (probably not: 30%; definitely not 22%). Satisfied college students felt they had worked hard and experienced success in their first year of college: “I made a smart investment the first time.” “I’ve had a successful first year of college.” “I learned from my mistakes my first year of college. I now feel better prepared going into my second year.” Dissatisfied or struggling college students and non-college attenders, in contrast, saw their poor decisions as coming from motivational and self-management issues: “I was disorganized”; “I’d be more prepared on sending in the correct applications, more organized”; “I’d manage my time better”; “I feel like I could have worked harder when it came to applying to colleges.” A few students felt they should have sought out additional knowledge: “Learn more about loans, explore majors.”

Enrolled and non-enrolled students repeatedly used the image of “following dreams” and “being true to myself” to explain their relative satisfaction with their decision about whether and where to attend college. These themes also appeared in feedback about what they would have done differently, if anything: “Maybe go to a different school and follow my dreams”; “I would stay true to myself and my dreams, rather than follow someone else’s”; “I wasted one whole semester in college, until I transferred to

[university] and majored in what I loved.”

Students held themselves responsible for their college enrollment outcomes and did not articulate the role of any larger social structures and systems surrounding them. For example, no students attributed their choices to external factors like the availability of financial aid or the lack of accessible college staff over the summer. No enrolled students blamed any aspect of their college for a negative experience, as with the student who reported that her university “is not a bad school but I wasn’t comfortable so I wanted to come home.” The closest reference any student made to academic readiness was one comment of regret about high school: “I would try harder in my classes.” Exosystem and macrosystem social forces, in short, were either not apparent or not salient to students’ lived experience.

Direct student feedback about the effects of receiving text message nudges for college tasks was encouraging (although respondents to the survey might have been more likely than non-respondents to view the messages as helpful). When asked whether the messages influenced their college preparation, the majority of students reported that the messages positively influenced their actions at the following percentages (selected as “somewhat true for me” or “very true for me”):

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- Got me to complete a task I hadn't yet done (86%);
- Informed me about something that I hadn't realized I needed to do (86%)
- Helped me manage my time better, like planning better or meeting my college deadlines, or not procrastinating as much (75%)
- Got me to reach out to a uAspire advisor for help (72%)
- Helped make the summer tasks less overwhelming or less stressful (70%)
- Helped make summer tasks for college clearer or more understandable (67%)

When asked the open-ended question of how they used the messages, the large majority of respondents reported that they used messages as reminders of tasks they needed to complete. "The text messages were reminders. [It was] a hectic time with everything going on and they definitely kept me on task with what needed to be completed." "I used them as a source of information. It was helpful and useful to someone like me who did not know a lot about preparing for college." "I read them and did what I had to do with my uAspire advisor after." These repeated themes suggest that our responding students took primary responsibility or worked closely with their advisors to complete enrollment tasks and keep track of deadlines.

A handful of students found the messages irritating and deleted them because they were already on top of the tasks, had another mentor, or had already decided they did not

want to go to college: "I usually had my things done ahead of time and the constant reminders annoyed me." "They told me things I already knew." "I had an Upward Bound advisor to talk things over with. I didn't need the messages." "I really did not know if I wanted to go to college."

Responses like these were rare, however. Of all text recipients, a small minority (approximately 4%) requested that the text outreach stop. Of survey respondents discussed here, the majority found the messages were useful, overall, in "helping me get everything done for college during last summer" (84% 'somewhat true or very true for me'). Nearly two-thirds of respondents agreed that: "Overall, the text messages helped me make up my mind about whether to go to a particular college or to any college at all" (62%). As this last response demonstrates, many students' commitment to attending a particular college was not firm at the point of leaving high school. Summer nudges (Castleman & Page, 2014c) clarified the choice for many; however, the messages were most effective in helping students complete the tasks to actualize their enrollment.

A Model of Summer Intervention

Mirroring the connections among college issues for students, college tasks affect one another. Figure 2 (page 21) shows the four major kinds of tasks required of college-intending high school graduates: postsecondary planning, financing, logistics/information, and anticipatory socialization.

Figure 2: Levels of Summer Melt Intervention



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The intervention model in this figure specifies the content of summer melt interventions, but it also indicates the interrelations among requirements in the last stage of college access.

The summer begins with high school graduation. By the time they graduated from high school, all of the 2011 and many of the 2012 Summer College Connect students had completed the many tasks involved in choosing to attend college: applying, being accepted, and deciding where to matriculate (Hossler & Gallagher, 1987). By graduation, most students had also completed financial aid applications and received their aid package from their intended college. Some students' financial aid was delayed because they completed the FAFSA late. Others faced delays in financial aid awards because their FAFSA was flagged by the U.S. Department of Education or their intended institution for income and asset information verification. Nearly all the graduates faced summer tasks of filling in gaps between their financial aid and the costs of college attendance. The most pressing set of summer tasks, therefore, has to do with ensuring the financing of the first year of college. Higher-income students with parents who are able to pay for college, have strong enough credit histories to qualify for different types of loans, and/or take responsibility for loan procedures bypass this step. Similarly, a handful of low-income students who receive early notification of full financial aid from highly selective colleges or programs like the Gates Millennium Scholarship face considerably less financial

pressure. Even students with extensive financial aid packages, however, face additional college expenses that are not covered by their awards and that can derail their plans.

As discussed, many of the low-income students are unable to work out how to finance payment for the college where they have been accepted and want to attend. Unable to find an affordable way to matriculate at their desired college, these students are forced to reopen the previously-completed process of deciding whether and where to go to college. In repeating the college application and college decision steps, students typically decide either to attend the local community college or not to matriculate anywhere. Whatever the outcome of repeating the college decision process, summer time spent in this way takes away from time spent on other preparation tasks.

All Summer College Connect participants completed informational and logistical tasks that were largely or solely the responsibility of the student rather than a parent. Postsecondary paperwork and related bureaucratic procedures were new and frequently incomprehensible to these 18-year-olds and their families. In fact, advisors found that students and parents often missed crucial requirements and deadlines when colleges switched from paper-based communication to sending bills and other information electronically. Even the very few low-income students with full financial aid needed to complete the cluster of logistical

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college preparation tasks and paperwork. In contrast, families who are college-educated, savvy, and technologically connected typically assist students with logistical issues or take responsibility for these tasks themselves. Such students are heavily supported or freed entirely from this set of challenging tasks (McDonough, 1997; Wartman & Savage, 2008).

Information barriers hinder students who are at the stage of dealing with logistical issues. Typically, students encounter a block in a college or financial procedure or discover something in their paperwork that brings their plan into question. For instance, the student and her mother who did not understand the term “trimester” on the bill misunderstood what a full year of college would actually cost. Like this Summer College Connect participant, students who were tripped up by informational barriers were sometimes forced to return to the task of trying to pay for college and many wound up reconsidering the whole idea of college.

Anticipatory socialization issues generally occupy the pre-college summer of high school graduates from higher income, college-educated families. In fact, most higher income students enter directly into the level of anticipatory socialization where they spend their summer rehearsing and preparing for being a college student and campus community member (McDonough, 1997). Such preparation is likely to affect the smoothness of the transition into college and, arguably, college persistence (Attinasi, 1989;

Merton, 1968). As described, very few of the low-income study participants were able to spend the summer prioritizing their consideration of residential options, choosing courses, finding and using campus resources, connecting with future classmates on social media, addressing academic weaknesses, and generally anticipating what it will be like to be a college student. Students can fall from even this top level of Figure 2 when, for instance, they are unable to afford books, encounter racism during orientation, or face uncertainty about how to acquire a work-study job. All of these circumstances affected students in the qualitative study.

In sum, pre-college summer intervention with low-income students appropriately includes assistance with interrelated clusters of financial, logistical, and socialization tasks. Low-income students frequently encounter financial and logistical barriers related to socioeconomic status. When these barriers require students to revisit basic decisions about where and whether to attend college, they contribute to summer melt. Even low-income students who enter college in the fall after high school graduation are likely to find that the lack of pre-college socialization opportunities positions them poorly for an optimal transition into higher education.

Discussion: A Tangled System

An ecological view of summer melt among low-income and first-generation college students reveals the advantages of an interactive systems theory for understanding the problem. Within the summer period,

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each student is part of a complex ecology that combines that individual's interconnected settings and relationships. These direct experiences, in turn, are influenced by organizational and policy levels of the environment in which students are not physically present. The interaction of issues in the summer is affected by individual motivation and capabilities, which themselves fluctuate with changing tasks and signals from the environment.

Summer melt arises from a tangled web of interacting educational and financial institutional practices, academic background, family relationships, and peer and community experiences. College financing tasks, for instance, are intertwined with institutional calendars, family and peer issues, college knowledge, cultural and community norms, and academic history. The role of timing is clearly important in understanding why significant numbers of low-income students fail to matriculate at the colleges where they have been accepted or intend to enroll. With rare exceptions, no high school, college, or college preparatory program takes responsibility for maintaining the alignment of aspirations, expectations, and enrollment tasks over the summer. Few low-income parents can take over the tasks of financing higher education and completing paperwork for their children. As a uAspire advisor said: "The summer is kind of no man's land, no one else is doing this work because the high schools are done with the students and the colleges, even though they might be reaching out, they're not doing so in a way that really

gets to our population of students." Policy accountability levers are weak or absent in the post-high school summer: most high schools can count their students as college-bound graduates, and colleges do not have to count a non-matriculated student in retention statistics. The organizational decoupling of K-12 and higher education (Venezia & Kirst, 2005), and the disincentives for either high schools or colleges to provide summer support are exosystem factors that may thus contribute to high levels of melt.

The words of a uAspire staff person aptly capture the "broader, tangled system" that belies the American dream for her students:

They're doing what they can with what they have to better themselves, and still, the odds are stacked so high against them. And when you see that it's part of a broader, tangled system, it's very frustrating.... They did everything we asked them to do. And they're willing to twist themselves into any shape to try to fit that mold. And you know, there's just not an affordable path.

Viewing summer melt as an ecological problem shows how social and educational inequalities that emerge from connected social contexts appear on the ground and are worked out by different individuals. It also offers a guide for organizations, policy-makers, and researchers who wish to understand how and when to intervene effectively to boost college entrance and

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persistence among college-intending low-income students.

Ecology theory emphasizes the importance of coordinating efforts and reducing incongruence across student and institutional contexts that collectively determine college readiness. Efforts to improve college access require appropriately timed supports that enable students to access financial resources and to understand and complete complex bureaucratic tasks. This assistance can be delivered in the summer by high schools or college access programs that continue to deliver services to recent graduates, or by colleges that begin working with admitted, pre-matriculated students.

Comprehensive recommendations for practice are detailed in Castleman and Page (2014b). Best practices for high schools include the collection of exit survey information about students' admission status and enrollment intentions. High schools also need to obtain National Student Clearinghouse fall enrollment data to determine the extent of summer melt. Depending on their level of resources, schools and school districts can provide various types of assistance for graduating students. At a minimum, schools can produce worksheets for summer pre-enrollment tasks that are personalized for a student's intended college. Costlier, more intensive interventions include proactive summer outreach to college-intending students offering assistance in completing college financing and informational tasks. This outreach can be delivered by high school

or access program counselors, by digital text message, or both, and evidence indicates that being proactive with students is critical to connecting them to the summer support from which they can benefit.

Castleman and Page (2013b) detail the content and costs of various summer melt interventions and call for action by colleges in the form of active outreach to admitted students who have indicated their intention to matriculate. Such outreach could be carried out by college admission officers, first-year transition program staff or currently enrolled students who are alumni of the incoming students' high schools.

Stemming summer melt also requires systemic changes such as financial aid reform or government or accreditation requirements that would hold colleges and universities accountable for their rate of summer melt. Major expansion of summer bridge programs would be another useful systems-level change. On a smaller scale, colleges could incorporate more personalized communications technologies to more effectively reach out to students who have not completed important summer tasks, like logging in to their online portal or registering for orientation.

Regardless of which entities deliver summer melt interventions, research on related student outcomes and costs should be conducted. Like the studies reported here, randomized controlled trials with a qualitative component are the best way to

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assess the impact of a particular intervention. New research should vary the timing and duration of interventions, ideally beginning before the senior year of high school and following students into college. A large-scale national study of this type is currently beginning with funding from the U.S. Department of Education Institute of Education Sciences (<http://ies.ed.gov/funding/grantsearch/details.asp?ID=1560>).

Whether originating from a high school, a college access program, or a college, intervening in and increasing college access will only be successful when programs and policies act upon the entire ecology. Importantly, the supports that students need to actualize the offer of college admission might have limited relevance to increasing their capacity to succeed academically once enrolled (Conley, 2010; Perna, 2005). Reducing the summer barriers to matriculation would enable college-accepted, low-income students to spend the months after high school graduation preparing for the academic and social aspects of being a college student. A summer spent remediating academic weakness, connecting with future classmates, considering classes and majors, and anticipating the college experience is arguably better aligned with the conditions for maximizing students' progress toward their ultimate goal: attaining a college degree that opens the door to upward social mobility.



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