Summer Melt at Community Colleges:

Effective Intervention Strategies for Research

Patrick Gill

Ohio University
Abstract
This essay addresses the gap in higher education’s response to summer melt, looking specifically at community colleges. It provides a summer melt literature review, a description of student populations it impacts, and evidence on how community college students are most prone to summer melt. The essay acknowledges strides that k-12 educators have made in the larger study of summer melt, while highlighting potential challenges higher education administrators face in addressing the problem. To provide more than a theoretical understanding of factors impacting education administrators, the essay outlines a 2014 research study to be conducted by the author at his institution. By building upon intervention strategies from k-12, asking new questions, and providing a comprehensive design, the author both situates the study of summer melt at community colleges in the larger discussion and provides an example of a study to be put into practice (adapted, tested, and improved) at other community college institutions.

*Keywords*: summer melt, higher education, research study, intervention, survey, k-12
Summer Melt at Community Colleges: Effective Intervention Strategies for Research

Chapter One: Introduction

Summer melt is a term used to describe traditional-aged college intending students who, for whatever reason, fail to enroll fall semester after high school graduation. This concept is based on the understanding that a gap exists between k-12 and higher education, and students do not have the necessary support to make the transition. Summer melt is not specific to four-year intending students, but most available research prioritizes four-year institutions or has been based largely on students with intentions to attend a four-year institution. The intervention strategies and framework to address barriers related to summer melt also speak to students generally and do not differentiate between two- and four-year populations. In this essay, I attempt to shift our attention to higher education’s role in addressing summer melt with a specific focus on community colleges. I theorize that community college students are more likely to succumb to summer melt due to the factors that make them more at-risk in general.

Considering the stakeholders involved, summer melt support can come from the high school or school district, college or university that the student intends to attend, or both. However, most research on this issue has been initiated by k-12 and not higher education, due in part to available information on students’ intentions. Since most summer melt research has come from k-12, it has been designed around students first and their intentions second. High schools and school districts have the opportunity to provide students with “senior exit surveys,” where all students are asked to provide information on their high school experiences and their postsecondary plans. From this baseline information, high schools and school districts can track each student’s success at reaching their respective institution. High schools and school districts are able to collect information on students that colleges are not privy to. They have a captive
audience, can survey each and every student, and they are able to avoid challenges that come with working with dependent students (some of whom are still minors). K-12 researchers approach the summer melt issue in this manner because they are interested in how all students meet their postsecondary plans and less interested in their college of choice, which introduces a gap in purpose with respect to higher education.

To meet the purpose of this essay, it is important to highlight challenges that come with colleges starting early (even before established new student orientations and summer bridge programs) for college and university educators. Based on current gaps between k-12 and higher education and a lack of coordination between community colleges and area high schools, community college administrators need to work around these challenges to address the problem of summer melt. Accordingly, colleges and universities experience challenges when it comes to knowing student intentions at the appropriate time to address summer melt. Unlike k-12 educators, they cannot deliver a senior exit survey—or what I term a “college entrance survey”—with the same relative ease. If a connection is not already in place, college student personnel must establish relationships with high schools and coordinate visits. In addition, they are subject to the high school calendar, room locations, and delivery format of the classroom. Finally, they are required to get Institutional Research Board (IRB) approval from their own institution, which requires letters of consent, parental letters of consent and student letters of assent for minors, letters of support from partnering high schools/administration, and a setting and delivery format that avoids undue pressure for students to complete the survey. Determining students’ interest can be a cumbersome process, and this is merely to determine who should receive student support as they make the transition from high school to college.
To address some of the gaps and challenges in practice, this working paper identifies and fills in the gap in the theoretical and practical literature on college access and choice, provides higher education administrators with an understanding of the widespread phenomenon of summer melt, how it impacts community college students specifically, what k-12 interventions have been studied and proved effective, and how this translates to recommended forms of support at community college institutions. At the paper’s conclusion, I outline a summer melt research project that is being implemented at a large, urban community college in Ohio for summer 2014. From this, readers may glean some of the challenges and successes that come with designing such a research project, anticipated results, and ways to tailor similar research based on institution type, staffing, and feasibility. My hope is that community colleges, due to their proximity to and established relationships with high schools, can build upon the successes of k-12 summer melt research and begin to address this issue, which will in turn help the colleges themselves and strengthen their communities.

Chapter Two: The Summer Melt Phenomenon

College Access and Choice

As no theoretical models exist to explain why students melt over the summer, it is of benefit to begin by looking at student access and choice theory and what impacts traditional student college decision making. The layers that describe why students choose the colleges and universities they do may also influence what ultimately prevents them from attending. At the very least, it presents a gap in the theoretical model where students make a choice or are forced into a decision to immediately not attend.

College choice literature became widely discussed in the 1980’s. According to Hossler and Gallagher (1987), it was at this time that college choice began to be seen as a developmental
process (Jackson, 1982; Litten, 1982). Instead of relying on purely sociological and economic models, Jackson (1982) posed a combined model of three phases: preference, exclusion, and evaluation. Preference is built upon correlates for student interests (aspirations, context, and family background); exclusion is based upon cost, offerings, requirements, benefits, and geography; and evaluation happens when students rate each option and select accordingly. Litten’s work (1982) contributed aspects to consider while following students through a linear model that was not unlike Jackson’s. His work considered aspects that affected various stages: aspirations (background, personal attributes, high school attributes, student’s performance, and environment), decision to start process (public policy), information gathering (college actions and influences/media used), and applications (college characteristics and college actions), all of which affected enrollment. Some of the models developed during that time laid the groundwork for more complex, future models.

From the notion of college choice as a developmental process, theorists began to see it as multilayered and complex. Hossler and Gallagher’s (1987) seminal three-phase model looked at predisposition, search, and choice. Like earlier theories, predisposition is impacted by socioeconomic status, ability and student achievement, peer and parent influence, organizational factors, pre-college school experiences, and location and proximity to campus. However, unlike earlier models, the search phase is not static, in that students all go through different processes at this point and decisions are not always rational. The final stage, choice, is hard to study, due to the interactive nature of a student’s final decision.

The idea that college decision making was not always rational or static moved thinking toward what St. John, Asker, and Hu (2001) described as “diverse paths in the educational attainment process” (p. 423). From this vantage point, there exists a sequence of choices,
students make these choices in “situated” contexts, and public policy works across student outcomes and in different contexts. Perna’s (2006) access and choice model draws earlier student choice work and brings together human capital and sociological models through the concept of “habitus,” an individual’s situated context. Here, an individual’s college choice is only linear insofar as the first two stages (demand for higher education/supply of resources and expected benefits/expected costs) take place at the foreground of deeper layers. These layers are habitus; school and community context; higher education context; and the broader social, economic, and policy context (p. 116). Student access and choice has, therefore, moved from something static based on a prescribed path to fluid based on an individual’s personal situation and the myriad of factors simultaneously shaping those decisions.

Summer melt does not fit into student access and choice models because the models end with “choice” most often and not typically “enrollment.” Summer melt brings to the fore the fact that these two are not one in the same, especially for populations of students prone to making decisions to attend an institution and then not complete the matriculation process. In most of the stages, choice is anticlimactic in that decisions have been made in context and is the end result of a number of other choices along the way, not a stage where some action typically happens. With that said, educators need to begin thinking of choice as happening within the same layered context as other stages of the college access and choice model (not the end product), see the stages as recursive and not static, and expand college access and choice models to include barriers that impede enrollment. This would ensure that the process for traditional students extends throughout the summer and does end before a student completes all steps that lead to college-going. Summer melt interventions have addressed student challenges from a framework that considers financial aid packages, informational barriers, and social/emotional barriers
(Castleman, Arnold, & Wartman, 2012); however, scholarship positing summer melt theories is all but nonexistent. Such a theory would likely include these areas of concern, but they could uncover other factors, in context, that thwart matriculation. To begin understanding what takes place at this time, we need to look at its impact and work back through who summer melt affects.

**The Summer Melt Impact**

Summer melt research has been conducted through educational research organizations, by school districts, and with the help of community-based organizations. This work accounts for the extent of our understanding of summer melt today. Summer melt has received growing attention in the years following “Potholes on the Road to College,” conducted by the Consortium on Chicago School Research (Roderick et al., 2008). In 2005, these researchers found that 96% of seniors hoped to earn a college degree, and 83% of that total had aspirations to earn a bachelor’s degree, but only 41% followed the standard steps to enroll in the fall (Roderick et al.).

Based on 2010 data collected by Fulton County Schools (GA) at 14 traditional high schools, 87% of seniors intended to attend college, yet 22% melted over the summer (Matthews, Schooley, & Vosler, 2011). In a large urban district in Fort Worth (TX) in 2010, 82% of graduates anticipated attending college; however, only 68% applied, 53% were accepted, and 32% actually enrolled (Daugherty, 2012). Based on their definition of summer melt as the rate of strong college intenders who do not enroll in college by October 1, 40.6% of students fell victim to this. The School District of Philadelphia (PA) reported that, based on the 2010-11 senior exit survey, 84% of those intended to enroll in college and only 47% actually matriculated (Strategic Data Project, 2013). Incorporating these data with those from cities such as Boston (MA) and Providence (RI), the Strategic Data Project estimated that 10-40% of students across the nation melt over the summer (Castleman, Page, & Snowden, 2013). These studies across the United States provide a
composite of how summer melt affects students in general but not according to socioeconomic status (SES), race/ethnicity, or first-generation status, which needs to be analyzed further.

Factors Contributing to Summer Melt

Low-SES students are more prone to summer melt from a theoretical standpoint and based on studies correlating the two. There is a direct relationship between areas of poverty and lack of resources at low-income schools. According to the U.S. Department of Education, low-income students need more support in order to succeed, but Title I money at lower-SES high schools is not being used in ways that would put these schools on equal footing (2011). Accordingly, students at these school districts do not receive the same resources or support that would enhance the college-going process. Research shows that summer melt rates increase for lower income families and for those schools with greater percentages of students qualifying for free-and-reduced price lunch (Castleman et al., 2013; Castleman & Page, 2013; Castleman, Arnold, & Wartman, 2012). To look at a specific study, Castleman and Page (2013) attempted to generalize the phenomenon of summer by answering questions as to what extent college-intending students fail to matriculate to their respective college choice, to what extent student plans change over the summer, and how SES creates differences in these rates. The authors looked at two non-overlapping data sets, a sample of 1,861 applicants from the Last Dollar Scholarship through uAspire, a non-profit organization in Boston (MA) and the Education Longitudinal Study (ELS) of 2002, both of which took into account SES. From these analyses, the authors estimated a 22% melt rate for low-SES uAspire students (compared to 18% for wealthier students) and 15% for low-SES students from the national sample (10% for wealthier students) (p. 15). Available information should lead us to the conclusion that low-SES students experience summer melt at a higher rate than their middle- to upper-class counterparts.
National data and specific summer melt research also describe how this phenomenon negatively impacts students based on race/ethnicity. Certain risk factors are pervasive for African American and Latino students. In 2010, 38.2% of Black and 35% of Hispanic children under 18 were living in poverty, compared to only 12.4% of White children (NPC, 2013), which directly relates to factors that would prevent an individual from attending college. More African American and Latino children are being educated in low-income schools. As previously noted, these schools have fewer resources to offer them, which leads to disadvantages in terms of the college search and admission process (Haveman & Smeeding, 2006). Research bears this out. The Consortium on Chicago School Research report described how Latino graduates were 12 percentage points less likely than African-American high school graduates to matriculate to college, who themselves were 13 percentage points less likely than White/Other Ethnic students to make the transition (Roderick et al., 2008, p. 19). While their research showed little difference between African American students and White/Other Ethnic students when controlling for high school success and socioeconomic factors, in sheer numbers, African American students and Latino students were much more likely to experience summer melt. When it comes to students making the transition from high school to college based on race/ethnicity, it is clear we are operating on a level playing field.

Other factors often associated with summer melt are a student’s first-generation status and parental/familial involvement. Scholarship exists that links these factors to a student’s success in attending college (Perna & Titus, 2005; Rowan-Kenyon, Bell, & Perna, 2008; Enberg & Wolniak, 2010). Enberg and Wolniak (2010) conducted a study using data ELS from 2002 to explore student transitions from high school to postsecondary education. In the study, statistically significant findings of whether or not a student enrolled at a two- or four-year
institution included whether or not a student discusses his or her college plans with parent(s) and family/friends’ desire for the student to attend college (p. 144). While this is not the same as a student’s first generation status (or having parents who attended and graduated from college), there is a clear correlation between parental involvement and a student fulfilling college plans. Summer melt research touches on first-generation/parental involvement issue by addressing factors that impact summer melt (Daugherty, 2012), by coupling first-generation with minority status and its impact (Roderick et al., 2008), and by describing particular challenges with completing the FAFSA (Owen, Bettinger, Long, & Oreopoulos, 2013). Unfortunately, no empirical evidence exists that describes first-generation-status as a cause of summer melt, despite the fact that summer melt literature relies heavily on the assumption that social/personal factors, including parental involvement, is critical to a student’s successful transition. The factors mentioned, however, provide a broad understanding of what forces impact summer melt, regardless of the type of an institution the student selects as his or her college of first choice.

Impact on Community Colleges

Very little information is available about summer melt as it pertains to the type of institution, baccalaureate or community college. This issue stems from the current efforts of summer melt research. Research sometimes prioritizes baccalaureate institutions due to expected benefits and “match,” which interprets whether or not students are finding the right college fit based on their academic performance and likelihood of being accepted (Bowen, Chingos, & McPherson, 2009; Roderick et al., 2008). The underlying issue is how students who have high aspirations and/or potential set their sights too low. If misinterpreted, this concept can downplay the value of community colleges, but even match acknowledges the dilemma of summer melt. Other, related, challenges arise from the widespread misrepresentation that community colleges
are a secondary or backup choice. Thankfully, high schools and school districts are often only interested in students meeting their intentions. This approach deserves further consideration as summer melt becomes a more important topic for higher education experts.

Evidence has surfaced that shows community college students are actually most at risk for summer melt. Fort Worth Independent School District (TX) found that a melt rate for students intending to attend community college was 75%, compared to 39% for weaker four-year institutions and 19% for stronger four year institutions (Daugherty, 2012). (Daughtery, 2012, p. 9). It is possible to locate intentionality when looking at scholarship programs tied to a particular institution or requiring students to select in order to apply funding. Looking at the uAspire sample mentioned earlier, only a small percentage of those scholarship students intended to enroll at a community college; however, 40% of those fell victim summer melt (Castleman & Page, 2013, p. 16). The authors described this group of students as “particularly vulnerable.”

Based on a limited data set from a scholarship project, which I oversee at a large, urban community college in Ohio, only 28 out of 63 scholarship recipients began in fall 2012, following their senior year (a melt rate of 66%). In 2013, with a substantial increase in recipients and a focused outreach effort, 105 out of 192 began the following fall (55% enrolled, with a melt rate of 45%). The increase in students matriculating showed improvement, but the rate of summer melt was still substantial. Research on their community college-intending students’ melt rates is, however, limited. While no large studies on community college students exist, the correlates suggest that community colleges attract students with the most factors that would prevent them from attending college immediately following high school.

Due to their open access mission and low cost, community colleges attract a greater portion of at-risk students with barriers related to their success. Some of the factors that describe
community college students are that they are more likely to be from low income families (one-fourth fall into the lowest income group) and more likely to be of a minority status (NCES, 2006). The rate of lower income students enrolling in college has not grown compared to its higher income counterparts; however, those who do enroll are more likely to select a community college (Baum, Ma, & Payea, 2013). In addition, the highest at-risk populations based on race and ethnicity enroll at community colleges at the greatest rates. According to the National Center for Education Statistics, in Fall 2011, 35% of Blacks and 46% of Latinos who enrolled in postsecondary education attended a community college versus 32% of Whites (2012). With these populations and their relative risk of melt, one can see how a number of community college-intending students are not matriculating.

The summer melt impact continues as we look at a student’s career goals and life circumstances. Studies have found that students enrolled in occupational programs, which are typically housed at community colleges, are more likely to delay their enrollment (Bailey et al, 2004). These students also explain the need to work as the determining factor in not matriculating on time. Compound the element of a student’s need to work with other life circumstances, and the impact only intensifies. Risk factors for community college students identified by the Community College Survey of Student Engagement (2003) included being academically underprepared, being a single parent, being financially independent, caring for children at home, working more than 30 hours per week, being a first-generation student, being a part time student, and identifying the cost of attending college as a significant issue. Traditional-aged community college students are likely to be impacted by one or more of these factors. All of these aspects add to our understanding that those intending to attend a community college experience challenges before they begin. The irony is that schools with open access missions
and, arguably, the least amount of barriers to enrollment, may leave students the most prone to summer melt.

Chapter Three: The Summer Melt Research Approach

Summer melt research arises from the idea that a more conscious handoff needs to be made between high school and college. According to Arnold, Fleming, DeAnda, Castleman, and Wartman (2009), this means either high schools need to “stay late” or colleges need to “start early”. These authors note that even though there has been some momentum to develop a P-16 system, most high schools conclude services to students after high school graduation, and colleges do not begin providing support until enrollment. This is not a light proposition due to the costs associated with providing services during a time without inherent benefit (for, in the traditional sense, high schools have already fulfilled their obligation and colleges have yet to begin theirs). K-12 has taken the lead on this issue due to an ethical responsibility to make sure their students get to where they intended. Higher education has, arguably, more to gain by addressing this dilemma in terms of increasing college going rates and the sustainability of its institutions. Amidst this discussion is the need to negotiate where high school ends and where college begins, something that will benefit all. This section will look at the limitations to both approaches from a systems level. It will further describe the direct impact on community colleges and how summer melt can be all but eliminated with better coordination.

Colleges and universities in general experience challenges in addressing summer melt. The information available to high schools that would most benefit colleges, student intentions, is only available to them after students complete the FAFSA, which, in many cases, is too late. The FAFSA also allows students to choose up to ten potential schools (Federal Student Aid), which means schools, even once they receive that information, are not that much closer to
understanding if their institution is the student's first choice. Further, colleges and universities cannot feasibly address the expanse of summer melt, which begins immediately following high school graduation. Students may drop off at any point during the summer, and often colleges and universities—even those with summer bridge or new student orientation programs—have already lost a wave of students by their first institution-to-student interaction. Finally, students may not be responsive to summer melt interventions, arguably more so if they are more likely to melt. In other words, those who were already going to make the transition are the ones who are more apt to take advantage of summer opportunities. Community colleges in particular experience further difficulties based on their open access mission. These include their late deadlines, their relatively inexpensive costs (including oftentimes no initial financial commitment), and the fact that they attract more at risk students that are more likely to succumb to the barriers related to summer melt.

It would appear that high schools and school districts have better circumstances to gather the data they need, but both systems have limitations. K-12 administrators can gather information about student intentions, but they experience considerable challenges with getting students to take advantage of such supports, understanding specific college processes and deadlines, and staffing for summer melt outreach. The Strategic Data Project Summer Melt Handbook (2013) explained that students may be more inclined to interact with college staff, such interactions may make them feel valuable, and colleges have information on tasks students have yet to complete (p. 34). In addition, colleges and universities have the opportunity to solicit help from current students for summer outreach, the opportunities of which are boundless in terms of creating mentorship programs and other ways to engage students into and beyond their first year. The fragmented nature of summer melt support opportunities suggest that this is not
an either/or proposition but one that requires dialogue between the entities (legally and ethically) that will allow for the best use of available information and resources to support students at this pivotal time during their educational experience. In addition, community colleges have a unique opportunity to partner with area high schools due to location and the ease of building upon established relationships, a powerful strategy that far too many institutions fail to leverage.

**Chapter Four: Creating a Community College Study**

We are aware that summer melt at community colleges is pervasive. While it is necessary to study the extent to which summer melt affects community college students, higher education administrators would see little utility in merely studying the percentage of students that never make it through their doors. Beyond this, studying the comprehensive regional impact of summer melt is a large endeavor that requires an established relationship with high schools on addressing this issue and would likely occur sometime into the future. Therefore, I propose working with a sample of area high school students to determine their intentions; provide self-selected, cost-efficient interventions; and provide an experimental group in-person interventions adapted from best practices that utilize expertise from the community college itself.

**College Entrance Surveys**

The success of k-12 summer melt research begins with senior exit surveys. The Graduate Exit Survey Handbook, by Strategic Data Project, explained that its purpose is to help districts understand the success of its schools in terms of graduating students on time and preparing them for success after high school. The handbook recommends phases for effective use, which include designing, implementing, promoting and collecting data, analyzing, communicating results, and impacting policy. In terms of the survey itself, it recommends designing with the end goal in mind. For this purpose, a college entrance survey would work to locate prospective
students, collect information not currently available to institutions (prior to FAFSA or institution application completion), and identify ways to support them as they make the transition to college. While college student personnel will experience specific challenges (previously mentioned) there is no other way to obtain the same information at this key moment. In order to begin providing communication to students when they graduate high school, if not before, the college entrance survey proves to be the best approach.

**Intervention Strategies**

Understanding students’ intentions is typically the first step taken by high schools and school districts to provide some support to help them reach their educational destination. However, staying late comes at a cost, which can be seen in designing effective tools (Castleman, Page, & Snowden) and staffing for student support. Therefore, k-12 educators have seen the need to make cost-conscious decisions to expand the purview of k-12 support. This parallels similar decisions higher education administrators need to make. Three summer melt studies undertook such efforts, and lessons learned from these should inform higher education administrators attempting to develop their own interventions.

**Big Picture Network of schools, 2008.** Castleman, Arnold, and Wartman’s study (2012) began with the basic question of whether or not recent high school graduates offered active college counseling over the summer enroll in college at higher rates than those who do not. For this research project, Big Picture Learning high schools were used, which are known throughout the nation for their counselors’ successful work with socioeconomically disadvantaged students of color, most of whom go on to college. In collaboration with the counselors, the researchers addressed three primary areas of support: financial aid packages, informational barriers, and social/emotional barriers. Over the summer, a majority of the treatment group received college
counseling, and in many cases, they connected with a college-transition counselor multiple times. Those in the treatment group were 14 percentage points more likely to enroll in college immediately after high school graduation than the control group. Based on the salaries of the two counselors and number of students in the treatment group, the cost was $187.50 per student. The researchers determined that this treatment was a cost-effective social investment, although they recognized the findings are not necessarily generalizable.

**uAspire and Fulton County, 2011.** Castleman, Page, and Schooley’s study (2013) was a collaboration between two educational agencies, uAspire in Boston (MA) and Fulton County Schools (GA), in 2011 to provide a summer counseling intervention. One central difference between the sites was the use of an assessment protocol for uAspire advisors but not Fulton County counselors. During the first meeting with the treatment group, uAspire advisors completed this protocol, which consisted of: 1) financial aid awards and unmet financial need, 2) calendar of key summer deadlines, and 3) assessment of social or emotional barriers. This meeting helped advisors follow-up with students throughout the summer (by phone, email, and text). uAspire students in the treatment group were 4.6 percentage points more likely to enroll in college immediately after high school graduation, and 12.3 percentage points for lower socioeconomic status, compared to 2.2 percentage points for Fulton County, and 8.5 percentage points for lower socioeconomic status. Researchers estimated that the cost equated to $100-$200 per student. uAspire students had higher rates of communication with advisors, which was potentially caused by a continued relationship with their advisor or from a $25 gift card incentive that was provided to students who responded. uAspire advisors also had more experience and expertise dealing with student issues within the assessment protocol, which could have also impacted how students viewed these services.
Dallas ISD, uAspire, and Mastery Charter Schools, 2012. Castleman and Page’s study (2013) built upon Castleman, Page, and Schooley’s (2013) research to answer lingering questions about who students will be most responsive to and the relative importance of personal outreach versus personalized outreach. The researchers looked specifically at the approach of text messaging as an efficient way to provide personalized and automated content to students. They noted that text messaging could turn a student’s impulsiveness into a strength with timely messages (p. 6-7). The authors also looked at peer-mentoring as an effective approach to summer melt interventions. The study analyzed each of these methods independently and also compared them to determine if one approach was more effective than the other. Castleman and Page concluded that, together, the text message and peer mentor interventions most benefited students who did not have access to college planning supports and those with less-developed college plans. The text message intervention cost about $7 per participant and increased fall semester enrollment slightly (compared to the peer mentor intervention that cost about $80 per student with a similar, insignificant impact). Both of these forms of outreach were cost-effective, compared to other forms of interventions; however, neither of these interventions proved to be as effective for all subsets of students as the previous in-person interactions.

The Community College Summer Melt Study

For the purposes of addressing the summer melt dilemma for the scholarship I oversee, I, as the lead researcher, have created a study to be conducted in summer 2014. Based on insights from the aforementioned studies; and due to other factors like relationships with high schools, cost, and personnel; the research question that the researcher is attempting to answer for this particular institution is: After identifying a group’s baseline level of commitment and providing common intervention strategies (phone calls, emails, texting, and Twitter messages), how
effective is an intervention program designed to provide face to face interventions with college student personnel in order to mitigate the impact of summer melt? Participants in this study consist of prospective scholarship seniors from 12 high schools within the region, nine of which house our college’s resource centers and three of which are partner high schools with our countywide re-engagement centers. All scholarship candidates must choose our college as their college of first choice, meet attendance requirements, pass all sections of our Ohio Graduation Test, and, in the case of the resource centers, receive a “B” average or higher in the corresponding high school class. Currently, there are no caps on numbers for prospective scholarship recipients.

**College Entrance Survey.** The study necessitates a college entrance survey while students are still in high school based on a variety of factors related to the matriculation calendar. The survey (see Appendix A) will help the researcher identify potential students for the scholarship. It will also allow the researcher gather data not available if students do not complete certain steps, such as their age, race/ethnicity, and gender if they do not complete the college application and their socioeconomic status and first-generation status if they do not complete the FAFSA. In addition, it will also capture information not available through these forms: preferred communication, living situation, high school GPA, use of guidance counseling, postsecondary goals, personal commitment to college, and attitudes about college readiness. It will also provide students the opportunity to opt-in for summer outreach and self-select the available forms of communication (phone, text, email, Twitter) to begin providing certain forms of outreach about deadlines, some of which take place before high school graduation.

In order to effectively implement the survey, facilitators at the nine traditional high schools and school counselors at the three non-traditional high schools act as the researcher’s
points of contact. Individual agreements with each school need to be met in order to administer the survey, which has been designed as a paper form and electronically. In addition, times and locations need to be coordinated with each school, letters of consent need to be signed, and the researcher must emphasize that completing the survey has no bearing on their success in their current coursework, high school graduation status, or ability to receive the scholarship. Successfully carrying out these initial steps will provide the groundwork necessary to connect with students throughout the summer, to inform intervention meetings, and for analysis at the study’s conclusion.

**Intervention Approach.** The summer melt research project was informed by previous k-12 studies. While it does not merely replicate one of these studies, there is much within them that warrants consideration. Overall, proactive outreach over the summer from counselors led to increased enrollment in the fall, which is especially true for lower-SES students (Castleman, Arnold, & Wartman, 2012; Castleman, Page, & Schooley, 2013). In one case, a customized assessment protocol helped deliver the desired results. Along those lines, the assessment should in some way be structured around a student’s financial aid awards versus financial need, the college’s steps to begin and corresponding informational barriers, and a student’s social and emotional barriers. While it is uncertain specifically how a counselor’s level of expertise affects the counselor-to-student interaction, students will benefit from somebody who is knowledgeable about the college’s processes and college going in general (especially regarding financial aid matters). Regarding text messaging (Castleman and Page, 2013), it proves to be the most cost-effective way to provide personalized messages over the summer, especially for those entering the summer without sufficient planning or supports, but educators may run into issues with
having access to working numbers and ensuring students follow through with their intentions. These factors strongly influenced this summer melt intervention design.

**Methodology.** The results from the College Entrance Survey will provide a list of candidates from the prospective pool of students. In order to avoid ethical concerns, all students who opt-in to this study will at least receive the self-selected form of communication throughout the summer. Like Castleman and Page’s (2013) study, this will consist of 10 messages; however, the messages will be more spread out and will begin on April 28 and end August 15. After students have shown some level of commitment by attending the first day of a two-day Summer Bridge event, on June 10, students will be stratified based on factors from the College Entrance Survey (race/ethnicity, socioeconomic status, first generation status, and high school GPA) to create two equivalent groups for an experimental and a control group. An $n$ of 120 will be necessary to ensure statistical significance (projecting that out of 60 students offered the in-person treatment, at least half will attend, and an equal number will receive the self-selected forms of communication). The experimental group will be asked to attend an in-person meeting between June 16 and August 15, which will be staffed by the researcher and another colleague from the department. Although the workload will be considerable for the two members of the team, the members will share a high level of expertise about the institution and college going in general, which will benefit the student. In addition, having only two members on the team will lead to greater cost effectiveness (Castleman, Arnold, & Wartman, 2012).

**In-Person Intervention.** During the in-person meetings, instruments created for the purposes of this project will be used by the counselors. The Summer Melt Student Intake Form (Appendix B) and the Summer Melt Assessment Protocol (Appendix C) will help guide the discussion. The Summer Melt Student Intake Form aligns with the college’s electronic intake
form (used by certain college student personnel at the institution) and asks students to disclose information on whether or not they have children, their employment status, their major/educational plans, challenges, and steps they have already completed. The Summer Melt Assessment Protocol aligns with the financial, informational, and social/emotional framework prioritized in summer melt literature. It also revisits topics students responded to in the College Entrance Survey. The key objectives and topics consist of: Welcome to the College, Steps to Begin, Portal/Schedule, FAFSA/ Scholarship, Social/Emotional Needs, and Campus Information/Transportation/Expectations. The organization of topics is influenced by holistic advising at the college and can be revisited once the counselors put the protocol into practice. Counselors are also encouraged to use discretion and be adaptable during the interactions, as the organic nature of the conversation may lead to other, meaningful areas. These meetings are expected to last around an hour to an hour-and-a-half. The Summer Melt Interaction Log (Appendix D) will be used to document the in-person meeting as well as capture any other interactions the counselor has with a student, whether they be face-to-face or virtual.

Results. To analyze the data, by the start of fall semester, a multivariate control mode of logistic regression will be used to determine how effective the in-person intervention was, controlling for other factors (age, gender, race/ethnicity, socioeconomic status, first-generation status, and high school GPA). Other tests will be run to determine how effective the intervention was relative to the self-selected forms of communication. Aggregate data from the College Entrance Surveys will be used to describe the population of high school graduates. It will also be used to describe those who did not experience summer melt versus those who did. These data may help draw univariate correlations between other factors and summer melt. All of these
findings will add to summer melt literature in general and serve as the first of its kind for summer melt research for community college students from a higher education standpoint.

**Anticipated Impact of Summer Melt Support**

Until recently, summer melt had been an unexamined phenomenon due to where it happened and when it took place. Neither k-12 nor higher education took responsibility for it because nobody knew that it existed. Now that higher education administrators are aware of its widespread impact, we have a duty to devote more resources to address the problem. This call to action should be realized due to all the good work k-12 educators have done in a relatively short span of time.

As community colleges continue to move from a history of access to completion, the purpose of summer melt interventions has the potential to be lost. However, summer melt research has provided some preliminary findings to show that a student’s successful start may lead to future achievement. Castleman, Page, and Schooley’s study (2013) showed that summer melt interventions increased a student’s ability to remain continuously enrolled throughout their first year and made them more likely to enroll and persist into their second year. This aligns with Completion by Design’s model pathway, which draws upon available literature to create a system of proven and promising practices (Milliron & Pennington, 2010). The central tenet of this design is that through early successes, students gain momentum, and these actions ultimately culminate in completion. A student’s momentum begins before he or she enrolls, meaning a student’s success can begin with a summer melt intervention. Determining how summer melt interventions impact student success, persistence, and completion is the next logical step for research in this area. Hopefully, this literature review and research study outline produces anticipated results, not only at this institution but at other community colleges nationwide.
References


Castleman, B. L., Page, L. C., & Schooley, K. (2012). The forgotten summer: Does the offer of college counseling for the summer after high school mitigate attrition among college-


http://www.gse.harvard.edu/sdp/resources/summer-melt/index.php


http://www.ccsse.org/survey/nr_closing.html

Daugherty, L. (2012). Summer link: A counseling intervention to address the transition from high school to college in a large urban district. Paper presented at the Annual Conference of the Association for Education Finance and Policy.


http://dx.doi.org/10.2307/1981605


College Entrance Survey

[The college] is gathering information on upcoming graduates in order to determine interest in participation for the [scholarship]. Students who participate in this survey and hope to attend [the college] have the opportunity to be contacted over the summer to help with the college going process. Research shows that outreach over the summer has helped students meet their postsecondary goals.

As a senior, we appreciate your participation in this survey. By completing this survey, we hope you will share information about you, your high school experiences, and your postsecondary plans. Individual results will not be published and your name and information will only be available to the researcher for the duration of the study. Participation is voluntary.

<table>
<thead>
<tr>
<th>Contact Information: Please share information about you that will be used for future contact, if you choose.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Last Name:</td>
</tr>
<tr>
<td>2. First Name:</td>
</tr>
<tr>
<td>3. Middle Initial:</td>
</tr>
<tr>
<td>4. Home Phone (Area Code and Number):</td>
</tr>
<tr>
<td>5. Cell Phone (Area Code and Number):</td>
</tr>
<tr>
<td>6. Email Address: @</td>
</tr>
<tr>
<td>7. Twitter Handle: @</td>
</tr>
<tr>
<td>8. Parent Phone (Area Code and Number):</td>
</tr>
<tr>
<td>9. Parent Email Address: @</td>
</tr>
</tbody>
</table>
Personal/Family Information: Please share information about your personal/family background. Any questions you do not feel comfortable answering, you may leave blank.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10. What is your zip code?:</td>
<td></td>
</tr>
<tr>
<td>11. What is your age?:</td>
<td></td>
</tr>
<tr>
<td>12. Are you male or female?</td>
<td>Male</td>
</tr>
<tr>
<td>13. How do you describe your race/ethnicity?</td>
<td>African American</td>
</tr>
<tr>
<td>14. What is your primary living situation?</td>
<td>With single parent</td>
</tr>
<tr>
<td>15. Did you receive Free and Reduced Price Meals during your senior year of high school?</td>
<td>Yes</td>
</tr>
<tr>
<td>16. Do you have children that you support (are you a parent)?</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Family Education: Please share information on your family educational background. Any questions you do not feel comfortable answering, you may leave blank.

17. Will you be the first in your family to attend college?
☐ Yes
☐ No
☐ Don't know

18. Please answer based on your parent(s) college background (choose one box):

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Did not attend college</th>
<th>Attended college, but did not graduate</th>
<th>Graduated from college</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. What is the highest credential earned by your mother, father, or sibling(s)?
☐ High school diploma
☐ Certificate
☐ Associate degree
☐ Bachelor’s degree
☐ Master’s degree
☐ Doctorate or professional degree
☐ None of the above

High School Experience: Please share some information about your high school experience and college preparation.

20. What is/was your cumulative high school Grade Point Average?: __________

21. How many total times (number) did you meet with your high school counselor about the college going process?: __________

22. In what areas did you seek help? (check all that apply):
☐ College search/Information
☐ College applications
☐ Scholarship search/Information
☐ FAFSA/Financial Aid
☐ Career Exploration
### Postsecondary Plans: Please answer the following question regarding your intentions after graduating high school.

23. What are your postsecondary plans?
- [ ] Attend a college or university
- [ ] Other (Military, work, or some other option)

**If you do not intend to attend a college or university, you may stop the survey at this point.**

### College plans: Please answer the following questions regarding your anticipated college plans to the best of your knowledge. Your decisions may not be certain, but try to answer the questions based on your expectations right now. You will not be held to these answers in any way.

24. What is the highest level of education you plan to complete?
- [ ] Certificate
- [ ] Associate degree (2 years)
- [ ] Bachelor's degree (4 years)
- [ ] Master's degree or higher

25. Have you applied/will you apply to [the college]?
- [ ] Yes
- [ ] No

26. If “Yes” to Question #25, do you plan to apply for [the scholarship]?
- [ ] Yes
- [ ] No

27. What do you expect will be your college-going status your first semester?
- [ ] Full time (12 credit hours or more)
- [ ] Part time (less than 12 credit hours)
- [ ] Don't know

29. Do you plan to work while in college?
- [ ] Yes, full time (40 hours or more)
- [ ] Yes, part time (less than 40 hours)
- [ ] No
- [ ] Don't know
### College Readiness: Please share your beliefs about whether you completely disagree, generally disagree, generally agree, or completely agree with these statements. Select only one box for each statement.

*Statements begin: “For my educational plans...”*

<table>
<thead>
<tr>
<th>30. “For my educational plans”</th>
<th>Completely Disagree</th>
<th>Generally Disagree</th>
<th>Generally Agree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I am prepared academically</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. I am prepared personally</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. I have strong family support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. I have strong community support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. I have strong financial support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. I have good role models</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. I am happy with the college decisions I have made</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Contact: Prospective scholars will be contacted over the summer no more than 10 times by each mode of preferred communication. This service is free and recommended for college-intending students.

I would like to be receive communication in the following ways (check all that apply):

- [ ] Phone
- [ ] Text (sign agreement below)
- [ ] Email
- [ ] Twitter

I agree to receive text reminders about the college going process. Standard text messaging rates do apply. I understand that I may opt out of this communication at any time by calling [phone number] or emailing [e-mail address].

<table>
<thead>
<tr>
<th>Signature of Student</th>
<th>Date</th>
</tr>
</thead>
</table>

If you agree to text messages, select your service provider below:

- [ ] Alltel (message)
- [ ] ATT (txt)
- [ ] Boost (mybo)
- [ ] Cellular One (mobile)
- [ ] Cincinnati Bell (gocb)
- [ ] Cricket (sms)
- [ ] Metro (mymet)
- [ ] Nextel (nex)
- [ ] Quest (ques)
- [ ] Sprint (mes)
- [ ] T-Mobile (tmo)
- [ ] Verizon (vtext)
- [ ] Virgin (vmob)
- [ ] US Cellular (email)
- [ ] Other: ____________________
Summer Melt Student Intake Form

First Name: ____________________ MI: ____ Last Name: ___________________________
Do you have children?  Yes / No   If Yes, how many children? _________________
What are your childcare arrangements? ________________________________________
Are you employed?  Yes / No  Do you plan to work while going to school?  Yes / No
Place of Employment: ___________________________________________ Shift: 1st / 2nd /3rd
Declared major (degree or certificate): __________________________________________
How sure are you about your major?  Very unsure / Unsure / Sure / Very sure
Circle all you plan to earn: Certificate / Associate Degree / Bachelor’s Degree

Challenges (check all that apply).  This information will be strictly confidential:

☐ Alcohol/Substance Abuse  ☐ Finances (Personal)  ☐ Steps to Begin
☐ Child or Adult Care  ☐ Goals/Career Choices  ☐ Study Resources
☐ Classroom Issues  ☐ Grades  ☐ Test Anxiety
☐ Computer/Email  ☐ Grief and Loss  ☐ Time Management
☐ Poor Concentration  ☐ Housing/Shelter  ☐ Tired/Fatigue
☐ Emotions, Moods, and Stress  ☐ Maps/Directions  ☐ Transportation
☐ English as a Second Language  ☐ Motivation/Attitude  ☐ Undecided
☐ Finances (Education)  ☐ Physical Health  Major/Career
☐ Social Support  ☐ Relationship Issues  ☐ Other:

Check the steps that you have completed:

☐ Application  ☐ Registration/Have a class schedule
☐ Placement Test/ACCUPLACER  ☐ Summer Bridge (Orientation)
☐ Met with Advisor/Academic Coach  ☐ FAFSA
☐ MAP (My Academic Plan)  ☐ Purchased books
**Summer Melt In-Person Meeting**

**Key objectives for the In-person Assessment Meeting:**
- Welcome the student to the institution and explain the purpose of the meeting
- Have student complete Student Intake Form to help guide meeting
- Provide an overview of steps to begin at the college
- Walk student through the web portal and allow them to use this tool
- Review the latest status of the students’ financial aid and steps to have a complete file
- Discuss scholarship requirements and the financial aid package
- Take note of any potential barriers to the student’s college enrollment

**Welcome to the College**
- Welcome student to the college
- Explain the purpose of the meeting: to help the student complete the necessary steps to begin fall semester as a scholarship student
- Have student complete Student Intake Form
- Answer any initial questions the student might have about the college-going process

**Steps to Begin**
- On-time registration begins (April 21)
- Complete the FAFSA by the Priority Deadline (May 1)
- Complete the Scholarship Application (due June 3)
- Attend Summer Bridge Event (June 10 and June 26)
  - This event counts as New Student Orientation
  - Make-up date for those who do not complete (TBD)
- Begin at New Student Enrollment Center (due June 26)
- Apply to the college (due June 26)
- Complete the ACCUPLACER placement test (due June 26)
- Meet with an Academic Advisor or Academic Coach (April 21-August 11)
  - Have a MAP (My Academic Plan) on file
  - Register for classes online or in person at Registration & Student Records
- Purchase books (Book Charge Dates TBD)
  - Available after Financial Aid steps complete
  - Website for Book Charge Dates
- Have a complete FAFSA on file by the Guarantee Deadline (due July 18)
- Accept Pell Grant, if eligible (May 1-August 11)
- On-time registration ends (August 11)
- Needed scholarship funding applied (August 11)
- Payment due for on-time registration (due August 11, by 7 p.m.)*
- Classes begin (August 18)
  *So long as students complete all steps prior to this date/time, tuition will be paid
Portal/Schedule
- Review Portal
- Show student MAP, course schedule planner, class schedule, and fee bill
- Refer student to appropriate office(s)

FAFSA/Scholarship
- Review student’s financial aid status
  - Not Completed:
    - https://fafsa.ed.gov
    - School Code
  - Check Financial Aid Status:
    - Web Advisor Financial Aid section
    - Financial Aid Award Letter
    - Accept or Reject Financial Aid Awards
  - Required Verification:
    - Verification website
    - 2014-15 Financial Aid Forms
- Refer to Financial Aid & Scholarships
- Provide information on scholarship
  - Concept of a Financial Aid Package
  - Scholarship Policy
  - Deadlines met prior to funding being applied

Social/Emotional Needs
- Review College Entrance Survey Results
  - How do you feel you are academically prepared?
  - How do you feel you are prepared personally?
  - How would you describe your family support?
  - How would you describe your community support?
  - How would you describe your financial support?
  - Who are your role models for academic success?
  - What will motivate you to complete college?
  - Who will help you to complete college (your support network)?
  - Describe the decisions you have made that will help you be successful in college.
- Refer to Student Intake Form for additional student needs
- Refer student to appropriate office(s)

Campus Information/Transportation/Expectations
- Provide student information on campus layout and transportation
- Go over student’s schedule as it relates to campus layout/buildings
- Discuss workload expectations and a student’s typical week
Summer Melt Interaction Log

Student ID #: _____________________________________

Student Name: _____________________________________

Counselor Name: _____________________________________

1. What type of interaction did you have with the student?
   - In-person meeting
   - Follow-up meeting
   - Phone conversation
   - Text message communication
   - Email communication

2. Who initiated contact?
   - Counselor
   - Student

3. What topic(s) did the communication cover? (Check all)
   - Steps to Begin (Enrollment steps, Summer Bridge, FAFSA deadlines, college schedule)
   - Portal
   - Registration status/Student’s schedule
   - FAFSA/Scholarship (Financial Aid status/Verification, Award status, Fee Bill)
   - Bookstore/How to purchase books
   - Personal needs
   - Campus information

4. What referrals were made? (Check all)
   - New Student Enrollment Center
   - Financial Aid & Scholarships
   - Academic Advising Center
   - Center for Student Success
   - Disability Services
   - Bursar
   - Registration & Student Records
   - Career Services
   - Student Leadership Development
   - Ombudsman
   - Minority Student Success
   - Bookstore
   - Other: ______________________

5. How much time did you spend interacting with the student (approximate)?
   - Less than 30 minutes
   - 30 minutes
   - 1 hour
   - 1½ hours
   - More than 1½ hours

6. Provide a 1-2 sentence summary of the interaction: