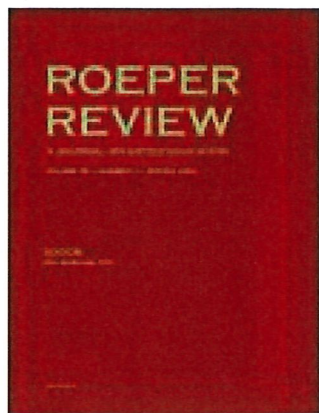


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Outcomes for Students on a Fast Track to College: Early College Entrance Programs at the University of Washington

Nancy B. Hertzog and Rachel U. Chung

Radical acceleration from middle school to university is an unusual option in the United States. The Early Entrance Program and the University of Washington (UW) Academy for Young Scholars housed in the Halbert and Nancy Robinson Center for Young Scholars are two of only 21 early university entrance programs offered in the United States. Due to the uniqueness of the participants and the programs, there currently exists a significant gap in the literature associated with the long-term impact of early university entrance programs. This article shares specifics of the early entrance programs and reports the preliminary results of the 35th-year follow-up study of the Early Entrance Program and the first alumni study of the UW Academy for Young Scholars. Findings relate to graduates' personal, academic, and professional lives since they graduated from the university.

Keywords: academic career, acceleration, early entrance, high achieving, long-term impact, long-term outcomes, social–emotional development

Acceleration is an educational process in which individuals “progress through an educational program at rates faster or at ages younger than their peers” (Pressey, 1949, p. 2). Radical acceleration, or the educational process where individuals graduate from high school 3 or more years earlier than their peers, is an effective but rarely used educational practice employed to help meet the intellectual and social–emotional needs of high-ability students (Gross & van Vliet, 2005). The academic and intellectual benefits of acceleration are well documented (Colangelo, Assouline, & Gross, 2004; Janos, Robinson, & Lunneborg, 1989; Noble & Drummond, 1992; Noble, Robinson, & Gunderson, 1993; Noble et al., 2007; Olszewski-Kubilius, 1995). However, radical acceleration to a university with a peer cohort is still a rare option.

The University of Washington (UW) is the only university in the United States with two unique early entrance programs for highly capable students. The Halbert and Nancy Robinson Center for Young Scholars has housed the Early Entrance Program (EEP) since 1977 and the UW Academy (UWAcad) since 2001. The center's mission reads as follows:

The mission of the Halbert and Nancy Robinson Center for Young Scholars at the University of Washington is threefold: teaching, research, and service. The Robinson Center is a leader in the nation for developing programs that serve highly capable young precollege and college students. (<https://robinsoncenter.uw.edu/>)

In this article, we provide an overview of the programs, discuss their history and their components, review the historical research related to the participants, and present preliminary findings from a recent alumni follow up study.

HISTORY AND BACKGROUND OF EARLY ENTRANCE PROGRAMS

The EEP is the Halbert and Nancy Robinson Center for Young Scholars's oldest and most historical program. In 1977, the late Dr. Halbert Robinson, a professor in the field of developmental psychology, created the program to give a select group of middle school students the opportunity to study at the university at a pace equal to their intellectual capabilities. With the inception of EEP, students as young as 13 entered as freshmen into the University of Washington. At the outset, students transitioned into the program through informal weekly meetings facilitated by the center psychologist. If needed, academic advising and counseling was available from program staff and faculty.

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In 1981 following Dr. Robinson's death, his wife, Dr. Nancy Robinson, a professor in the field of psychiatry and behavioral sciences, helmed the center as the new director. Finding that the students needed more preparation to be successful, she designed the Transition School (TS).

Transition School—Early Entrance Program

TS is a 1-year preparatory program that condenses most of high school into 1 year and prepares students to be successful at the University of Washington. The criteria for entrance into TS are as follows:

- ACT scores in the 85th percentile or above in English, math, and reading.
- Two years of grade transcripts that show a consistent level of excellence.
- A birth date that indicates that the student will not yet be 15 as of the starting date of Transition School.
- U.S. citizenship or permanent resident status.

After faculty and staff complete a comprehensive review of applicants, 16 students are typically admitted into TS. The curriculum of TS has evolved over the years, but currently students take English, history, physics, and pre-calculus for the first two quarters. In the second quarter, students also add ethics to their curriculum. In the third and final quarter, physics is replaced with one university class and a service-learning requirement that connects to their spring ethics course. The TS classes prepare these young students for college and, therefore, not only is the content accelerated but the humanities are structured to teach discourse and argument within the disciplines. Once students successfully graduate from TS, they officially enter the EEP program and are considered freshmen at the University of Washington. A more comprehensive examination of all of the components of the Transition School, including all of the support systems developed to facilitate their success at the university, may be found in Halvorsen, Hertzog, and Childers (2013).

University of Washington Academy Program

The UWAcad program, created in 2001, offers students the opportunity to drop out of high school and enter the University of Washington after 10th grade. The application process to the UWAcad replicates the application process to the University of Washington and the Robinson Center staff collaborates with admissions officers and honors academic counselors to select the 35 members of the cohort each year. Like other university admissions programs, there is no identification of giftedness. Applications are examined holistically for prediction of later college academic success. Data include test scores, personal statements, and teacher recommendations.

The curriculum of the UWAcad includes the "Bridge Program,"—the orientation program before the fall term

begins, an integrated English and science seminar in the fall term, Academy 198, and an "Intrusive" counseling model that mandates check-in appointments with the academic counselor at specific times throughout the 2 years before students declare a major.

What is unique about the early entrance programs at the University of Washington is that Washington state law mandates a contract with the university to allocate state money to support the early entrance programs. This money is calculated per pupil by his or her local home school. This revenue contributes to the support structures that facilitate the transition from middle or high school to the university. Supports include academic counselors, orientation programs, parent programs, and student support services.

Academic Counseling and Support Services for the Early Entrance Programs

The cohort model is probably the single most important and distinguishing feature of the Robinson Center Early Entrance Programs. The cohort model serves to strengthen relationships between students and to facilitate peer support throughout the students' time at the University of Washington. Many events are planned to bring students and their families together socially before the school year even begins. The new TS families are invited to a picnic hosted by a parent of an EEP graduate. Parent and student orientations follow, and then they go on a camping excursion to strengthen the bonding of not only the new class of students to each other but also the former TS cohorts to the new one. The UWAcad students also begin their year with a camping experience that involves mentors leading getting-to-know-you activities, and academic counselors engaging students in self-reflection about what they want to get out of their college experience. By the time students return from their camping experiences, friendships are formed, and the cohorts are supportive of each other.

In addition to the formal academic counseling they receive, students participate in ACAD 198 the winter quarter of their first year, a college-credit course taught by the director of our EEP and UWAcad program. In this class, the instructor provides information to students about navigating the university, including how to choose a major, how to write personal statements, how to complete scholarship applications, and how to communicate with their professors. One major project they complete is research on their proposed major, which culminates in a *major fair* where advisors from departments throughout the university are invited to share information about their majors. Students also receive weekly updates on opportunities available to them throughout the university. These may include study-abroad programs, undergraduate research, internships, and job experiences.

Programming for parents is an important part of the support infrastructure of the Robinson Center. Research has

shown that students need the support of their families. Each early entrance program has orientations for parents, as well as scheduled “check-ins.” In the TS, teachers hold parent conferences twice a year. Once students are enrolled in the university, the Family Educational Rights and Privacy Act laws require that parents obtain their children’s permission in order to be involved with discussions with the academic counselors about their children’s academic progress. It is rare for students to sign over permission to their parents. Instead, the program staff hold evening meetings with parents to inform them when registration occurs and to talk to them about the importance of talking to their own children about the choices they are making in their academic planning. Program staff explain to parents the university systems in place for continuous progress toward graduation. They also arrange evening sessions that include financial aid information and the content of the Academy 198 class. This year, several other opportunities for parents to get together were arranged including a book club and a research symposium on student health and wellness issues.

The Robinson Center also hosts special events, including an alumni speaker series and an annual open house to create a Robinson Center community of current students, families, and alumni. All of these events bring the community members closer to each other and provide support to students as they see graduates doing well beyond their previous lives at the Robinson Center.

SUMMARY OF RESEARCH

Research at the Robinson Center has consistently shown that early entrants perform well academically and appear to be healthy socially and emotionally. Other studies of acceleration have shown various educational benefits. A meta-analysis of studies by Kulik and Kulik (1984) found that academic acceleration was positively related to learning. A comprehensive review of acceleration studies reported on the various academic and social benefits of acceleration for bright students (Colangelo et al., 2004). These findings were generally consistent with a more recent meta-analysis (1984–2008) of the effects of educational acceleration on high-ability learners where the authors concluded that acceleration positively influenced academic achievement (Steenbergen-Hu & Moon, 2011). Specifically, acceleration was positively linked to standardized achievement tests, grades in college, prestige of college/university attended, and employment outcomes (Lubinski & Benbow, 2006; Steenbergen-Hu & Moon, 2011; Wai, Lubinski, Benbow, & Stieger, 2010). The meta-analysis results also suggested that university-based acceleration, particularly early college entrance programs, appeared most effective with students reporting great benefits to their academic and social-emotional development (Steenbergen-Hu & Moon, 2011).

A combination of different accelerative interventions could include attending school earlier than peers, skipping grades, individual subject acceleration, Advanced Placement classes, dual enrollment in middle school and high school, and early entrance to college (Gross, 2004). Gross (2004) concluded from her review that despite fears from parents and educators, radical accelerants socialized well with older classmates, experienced high to exceptional levels of academic success, and tended to work in high-status employment where they continued to excel. Brody, Muratori, and Stanley (2004) reviewed the literature on academic, social, and emotional outcomes of early college entrants from various programs including the University of Washington EEP and UWAcad programs and found that many entrants experienced great academic success without social or emotional problems. However, the research also showed that some individual students struggled with adjustment and did not achieve to the level expected of them.

Assouline, Marron, and Colangelo (2013) asserted that radical acceleration is “appropriate for only the most highly gifted students such as those who have an IQ that is three or more standard deviations above the average IQ” (p. 21). However, none of the programs at the University of Washington require an IQ score to enter. The Robinson Center staff echo the sentiment from Brody et al. (2004), who concluded that high IQ alone did not guarantee success for early entrants. Emotional maturity, personal motivation, and understanding of content were other important factors contributing to academic and social success for young college students.

Janos and Robinson (1985), Janos et al. (1989), and Janos, Sanfilippo, and Robinson, (1986) completed much of the early research about the Robinson Center programs in the 1980s, and Noble and her colleagues at the Robinson Center completed numerous studies from the 1990s onward (Noble & Childers, 2009).

Two major follow-up studies of EEP program alumni have been completed to date; the quantitative results of the third study are included in this article. The first was a 15-year follow-up that examined the effects of EEP on program graduates. Researchers wanted to know how “skipping high school” affected students as adults in personal and professional lives (Noble et al., 1993, p. 125). Educational, career, and socioemotional characteristics were examined and compared with two other comparable groups—students who had qualified for the program but had chosen high school instead and nonaccelerated National Merit Scholarship finalists. Results indicated that most respondents were satisfied with their decision to accelerate and that EEP graduates had entered graduate school in significantly greater numbers than either of the other two comparable groups (Noble et al., 1993). Group similarities were found for attitudes, interests, and values. In conclusion, Noble et al. (1993) found that accelerating into college was as healthy for students as remaining with same-aged peers with the socioemotional

development of most students “neither compromised nor harmed by acceleration” (p. 130).

The second study followed up with graduates of EEP after 25 years of the program. Researchers investigated patterns of work, education, and social affiliations (Noble et al., 2007). They were interested in why students chose to participate in the program and what aspect of the experience was either helpful or detrimental to the participants’ personal relationships and chosen professions. Results showed that many respondents had chosen early entrance because of their excitement to learn and that the peer cohort, support of faculty and staff, and intellectual stimulation were positive elements of the program. In addition, significant group differences were found at three different time points in the program’s history corresponding to changes in the programmatic structure of EEP, with students reporting more positive experience of the program over time. Significant differences were also found for gender, with males reporting less satisfaction in friendships and romantic relationships than females but a more positive effect of their gender on professional achievement. Overall, students graduated from college with high grade point averages, pursued graduate and professional education in great numbers, and turned out to be well-balanced individuals.

Only the first two cohorts of UWAcad have been asked about their experiences (Noble et al., 2007). According to the researchers, overall the students were positive about their university experiences and appreciated the social community that the Academy program offered to them. In 2010, the university completed an evaluation of the academic counseling program. This, too, showed an overwhelming positive impact on the students. Most significant about the report was the number of students who said that their relationships with the academic counselor and other Robinson Center staff contributed to their well-being and success at the university. There were issues, however, with just how much the Robinson Center students were integrating into the larger university community. This feedback has informed the Robinson Center staff, and continuous efforts to make students more aware of university opportunities are being explored.

The number of studies on the Robinson Center’s accelerated students has informed the field. Consistently, the research has shown that these students perform well academically; sometimes they earn the highest honors of the university, and they appear to be healthy socially and emotionally. For the third follow-up study of EEP and the first follow-up of UWAcad, we wanted to know about the long-term impact of the program on participants’ academic, professional, and personal lives. The study is ongoing, but in the following section, we share some preliminary findings, mostly descriptive statistics, from Phase 1 of the study. Findings will not only inform and improve the early entrance programs for current and future students but will also contribute to a growing body of literature related to the impact of acceleration.

THIRTY-FIVE-YEAR FOLLOW-UP STUDY OF ALUMNI

Method

Researchers employed a mixed methods approach comprised of two distinct phases to explore the main research question: How has participation in the Robinson Center EEP or the UWAcad impacted alumni’s personal, academic, and professional lives? In Phase 1, data were collected through a web-based questionnaire. In Phase 2, data will be collected through a semistructured follow-up interview of both random and special case samples of willing participants from Phase 1 of the study.

Participants

Participants of the study were all “alumni” of EEP and UWAcad Programs. Alumni include legal adults (18 or over) who have participated in either of these two programs and have graduated from or otherwise left the program by or before August 2013. An e-mail explaining the confidential study and inviting alumni to participate were sent to 587 alumni in October 2013. Of the respondents, 119 (62.0%) EEP and 73 (38.0%) UWAcad program alumni chose to participate in the study, resulting in a 32.7% total response rate. We achieved this response rate by e-mailing an additional reminder and then extending the original deadline by another 2 weeks to give participants additional opportunity to participate.

Instrument—Questionnaire

We adapted a previously designed questionnaire organized into seven sections: program impact, educational outcomes, employment outcomes, participant values, personal relationships, other/miscellaneous, and demographics. The demographic section was purposely placed last to diminish the possible influence of *stereotype threat* on participant responses, because previous research has indicated moving the location of the demographic questions could reduce the chance of stereotype threat (Steele, 2011; Steele & Aronson, 1995). In addition, Dillman, Smyth, and Christian (2009) recommended placing questions that solicit sensitive information, such as demographics, at the end of a questionnaire after participants have the chance to become more engaged in the questionnaire items.

The questionnaire was adapted and inspired from several different sources including the prior 15-year alumni survey developed by Noble et al. (1993), the 25-year alumni survey developed by Noble et al. (2007), the 35-year study of Study of Mathematically Precocious Youth graduates by Lubinski and Benbow (2006), and the 5- and 10-year surveys of University of Washington alumni (McGhee, 2009). We included survey questions that were only relevant to this

current study and modified questions as needed. Questions included a variety of open-ended and Likert-type scaled questions. The majority of Likert-type scaled questions were on a 4-point scale to discourage neutral answers. The EEP and UWAcad programs were abbreviated for the survey as EEP/ACAD. Sample questions included the following: Was there any aspect(s) of your EEP/ACAD experience that you felt was especially unique and beneficial to your academic life? If so, please describe briefly. Was there any aspect(s) of your EEP/ACAD experience that you felt was detrimental to your academic life? If so, please describe briefly. If I had to make my educational choice over again, I would choose to attend EEP/ACAD: 1 (*strongly disagree*), 2 (*disagree*), 3 (*agree*), 4 (*strongly agree*). Currently, what is your highest educational degree earned? How many hours would you be willing to work in your ideal job? Have you significantly changed your career path in your lifetime? If so, please explain. Did you travel abroad as a student? If so, where did you go and for what purpose? Would you consider sending your child to EEP/ACAD based on your own experience?

Data Analysis

Only the quantitative portion of the questionnaire was analyzed for this article. Using Excel, we provided tables to show the results of the descriptive statistics. Only a small sampling of the qualitative data is shared in this article to provide some possible explanations for the results of the quantitative responses. Phase 2 of the Alumni Study will include interviews and a more detailed analysis of survey qualitative data.

RESULTS

Demographic Information

In October 2013, we e-mailed study invitations to 587 people, 329 of whom were EEP alumni and 258 of whom were ACAD alumni. As seen in [Table 1](#), 119 EEP graduates and 73 ACAD graduates participated in our study, for a total of 192 participants. The EEP response rate was 36.2%, and the ACAD response rate was 28.3%. More females (115, 59.9%) responded to the survey than males (71, 37.0%), with three (1.6%) respondents reporting their gender as Other.

Participants were composed of several different racial/ethnic groups: 116 (60.4%) were Caucasian, 58 (30.2%) were Asian, two (1.0%) were Hispanic/Latino, and 11 (5.7%) reported Other. Of the Other responses, seven participants indicated that they were either biracial or multiracial. The majority of the sample, 163 (84.9%), were born in the United States. However, 80 (41.7%) participants indicated that they were either an immigrant or child of an immigrant. Forty-four (37.0%) EEP respondents and nearly half of the ACAD respondents (36, 49.3%), indicated that they were an immigrant or child of an immigrant.

TABLE 1
Demographic Characteristics of Participants in the Alumni Study by Program

Characteristics	Early Entrance Program (EEP) N = 119		UW Academy Program (ACAD) N = 73		Total N = 192	
	n	%	n	%	n	%
Gender						
Male	48	40.3%	23	31.5%	71	37.0%
Female	67	54.3%	48	65.8%	115	59.9%
Other	1	0.8%	2	2.7%	3	1.6%
Missing data	3	2.5%	0	0.0%	3	1.6%
Race/Ethnicity						
Caucasian	77	64.7%	39	53.4%	116	60.4%
Asian	31	27.1%	27	37.0%	58	30.2%
Hispanic/Latino	1	0.8%	1	1.4%	2	1.0%
Other	6	5.0%	5	6.8%	11	5.7%
Missing data	4	3.4%	1	1.4%	5	2.6%
Born in the United States						
Yes	106	89.1%	57	78.1%	163	84.9%
No	12	10.2%	14	19.2%	26	13.5%
Missing data	1	0.8%	2	2.7%	3	1.6%
Immigrant/Child of immigrant						
Yes	44	37.0%	36	49.3%	80	41.7%
No	74	62.2%	37	50.7%	111	57.8%
Missing data	1	0.8%	0	0.0%	1	0.5%
Marital status						
Single	30	25.2%	32	43.8%	62	32.3%
In a relationship	24	20.2%	28	38.4%	52	27.1%
Married	60	50.4%	8	11.0%	68	35.4%
Domestic Partnership	1	80.0%	2	2.7%	3	1.6%
Divorced	1	80.0%	0	0.0%	1	0.5%
Other	2	1.7%	3	4.1%	5	2.6%
Missing data	1	80.0%	0	0.0%	1	0.5%
Children						
Yes	40	33.6%	1	1.4%	41	21.4%
No	78	65.5%	72	98.6%	150	78.1%
Missing data	1	80.0%	0	0.0%	1	0.5%

Sixty (32.3%) participants reported that they were single, 52 (27.1%) in a relationship, 68 (35.4%) married, three (1.6%) in a domestic partnership, one (0.5%) divorced, and five (2.6%) other. Currently, 41 (21.4%) have children, and for the 150 (78.1%) who do not, 99 (66.0%) plan to have children at some point.

As expected, due to the different historical inception of the programs, the age range was substantially greater for EEP graduates. EEP respondents ranged in age from 19 to 40, with a mean of 31 ($SD = 7.58$), and ACAD respondents ranged in age from 20 to 28, with a mean of 24 ($SD = 2.20$); see [Table 2](#).

Impact of Program on Happiness, Education, and Social Relationships

In [Table 3](#), a majority of the respondents reported that they were *very happy* or *fairly happy* in the areas of academic

TABLE 2
Participants' Current Age and Age of First Marriage

	Early Entrance Program (EEP)	UW Academy Program (ACAD)	Total
Age	n = 119	n = 73	N = 192
Mean	31.0	24.1	28.4
S.D.	7.58	2.2	6.96
Range	19-49	20-28	19-49
Missing data	2	0	2
Age of first marriage	n = 63	n = 8	N = 71
Mean	26.5	25	26.3
S.D.	4.50	1.93	4.29
Range	19-38	22-27	19-38
Missing data	0	1	1

TABLE 3
General Happiness of EEP/ACAD Alumni

Areas	Very Happy		Fairly Happy		Somewhat Unhappy		Very Unhappy	
	n	%	n	%	n	%	n	%
Academic achievement	98	51.3%	88	46.1%	5	2.6%	0	0.0%
Family	115	60.2%	63	33.0%	10	5.2%	3	1.6%
Financial	72	37.7%	86	45.0%	27	14.1%	6	3.1%
Friendships	77	40.3%	91	47.6%	21	11.0%	2	1.1%
Romantic relationships	102	54.3%	43	22.9%	36	19.2%	7	3.7%
Work	78	40.8%	89	46.6%	17	8.9%	7	3.7%

achievement (97.4%), family (93.2%), friendships (87.9%), work (87.4%), financial (82.7%), and romantic relationships (77.2%). However, this table also indicates that slightly less than a quarter, or 22.9% of respondents, were somewhat or very unhappy in romantic relationships.

As to the effects of EEP/ACAD on the happiness of these areas, there were similar positive trends. In Table 4, the effect of EEP/ACAD on academic achievement was clearly considered very beneficial by 54.8% of respondents and beneficial for 37.8%, for a total of 92.6%. A majority also reported that the effects of the program were very beneficial

TABLE 4
Effects of EEP/ACAD

Areas	Very Beneficial		Beneficial		Detrimental		Very Detrimental	
	n	%	n	%	n	%	n	%
Academic achievement	130	54.8%	71	37.8%	13	6.9%	1	0.5%
Family	15	8.6%	126	72.4%	29	16.7%	4	2.3%
Financial	30	16.7%	131	72.8%	19	10.6%	0	0.0%
Friendships	39	21.8%	103	57.5%	32	17.9%	5	2.8%
Romantic relationships	25	14.5%	73	42.2%	62	35.8%	13	7.5%
Work	58	32.0%	103	56.9%	18	9.9%	2	1.1%

TABLE 5
Influence of EEP/ACAD

	Strong Positive Influence		Somewhat Positive Influence		Somewhat Negative Influence		Strong Negative Influence	
	n	%	n	%	n	%	n	%
Nurtured you intellectually	124	64.9%	62	32.5%	5	2.6%	0	0.0%
Prepared you for current environment	45	23.7%	122	64.2%	17	9.0%	6	3.2%
Rich social environment	41	21.7%	92	48.7%	36	19.1%	20	10.6%
Prepared you to find satisfying friendships after college	35	18.7%	95	50.8%	46	24.6%	11	5.9%

or beneficial in the areas of financial (89.5%), work (88.9%), family (81%), and friendships (79.3%) but noticeably less so for romantic relationships (56.7%). In other words, 43.3% of respondents reported that EEP/ACAD had very detrimental or detrimental effects on the happiness of their romantic relationships.

In a set of related questions, almost all of the respondents (97.4%) reported that EEP/ACAD had a *strong positive influence* (64.9%) or a *somewhat positive influence* (32.5%) on how the program nurtured them intellectually (see Table 5). The majority (87.9%) of respondents indicated that the program had a strong positive influence (23.7%) or a somewhat positive influence (64.2%) on preparing them for their current environment. Although a substantial number of respondents (70.4%) indicated that EEP/ACAD had a strong (21.7%) or somewhat (48.7%) positive influence on a "rich social environment" in their lives, slightly less than a third (29.7%) reported that the program also had a strong (10.6%) or somewhat (19.1%) negative influence. There was a similar ambivalence in responses on a related question about how the program influenced students in preparing them to find satisfying friendships after college. A high number of respondents (69.5%) reported a strong (18.7%) or somewhat (50.8%) positive influence but, again, slightly less than a third (30.5%) of respondents reported a strong (5.9%) or somewhat (24.6%) negative influence on finding satisfying friendships post-college.

Overall, 89.5% of the students strongly agreed or agreed that, "If I had to make my educational choice over again, I would choose to attend EEP/ACAD."

Educational Outcomes

Table 6 lists the rank-ordered reasons (by importance) for why students joined EEP/ACAD. We modeled this question after the one in the 25-year survey (Noble et al, 2007) but added one additional reason based on our experience with the

TABLE 6
Ranked-Ordered Reasons for Joining EEP/ACAD

	Very Important		Important		Unimportant		Very Unimportant	
	n	%	n	%	n	%	n	%
	Needed a challenge	123	64.4%	58	30.4%	7	3.7%	3
Excited to learn	120	62.5%	61	31.8%	8	4.2%	3	1.6%
Disappointed with previous schooling	37	19.4%	81	42.4%	58	30.4%	15	7.9%
Unhappy socially	22	11.6%	44	23.2%	63	33.2%	61	32.1%
Liked EEP/ACAD peer group	16	8.5%	50	26.6%	70	37.2%	52	27.7%
Fast track to profession	16	8.5%	32	16.9%	75	39.7%	66	34.9%
Parental pressure	9	4.8%	32	16.9%	44	23.3%	104	55.0%

early entrance students and parents: "Needed a challenge." Apparently, the students agreed that this was an important reason because it was the highest ranked reason for joining the program, with 94.5% of respondents reporting it as *very important* (64.4%) or *important* (30.4%). Following very close behind was the highest ranked reason from the 25-year alumni survey, "Excited to Learn," with 94.3% of respondents reporting it as *very important* (62.5%) or *important* (31.8%). "Disappointed with previous schooling" ranked third, with 61.8% of respondents reporting it as *very important* (19.4%) and *important* (42.4%). Next, more than a third of the respondents (34.8%) reported that "unhappy socially" was another *very important* (11.6%) or *important* (23.2%) reason for joining the program.

A significant majority, 181 (94.3%), of the respondents indicated that they had graduated from the University of Washington. Of the 11 (5.73%) who did not graduate from UW, 9 graduated from different institutions, and 2 did not graduate at all. Many of our program graduates have since pursued graduate and professional degrees.

As indicated in Table 7, 100 (52.1%) respondents have presently attained graduate or professional level degrees. Three of the 7 respondents who indicated other for highest educational degree earned have MDs in addition to a PhD or a master's degree. If we include these additional 3, we actually have 103, or 53.6%, of respondents who have presently attained graduate or professional level degrees. Of the 55 respondents who indicated that they presently are in school, 40 (72.7%) are in progress toward attaining graduate or professional level degrees. For the 7 respondents who reported other for this category, 4 indicated that they are concurrently pursuing MD/PhD degrees and one is concurrently pursuing a JD/MBA degree. If we include these 5, there are actually 45 (81.8%) respondents in school who are in progress toward receiving graduate or professional level degrees.

TABLE 7
EEP/ACAD Alumni Highest Educational Attainment and/or In Progress

	Attained (N = 192)		In Progress (n = 55)	
	n	%	n	%
Bachelor's	85	44.3%	5	9.1%
Master's	50	26.0%	15	27.3%
Doctorate (e.g. PhD, EdD, etc.)	27	14.1%	14	25.5%
Medical (e.g. MD, DDS etc.)	8	4.2%	9	16.4%
Law (e.g. LLB, JD, etc.)	15	7.8%	2	3.6%
Other	7	3.7%	7	12.7%
Missing data	0	0.0%	3	5.5%

In the previous 25-year alumni study, Noble et al. (2007) wanted to know whether respondents had experienced undue pressure to academically achieve from various sources as some high-achieving students were apt to experience. Some respondents indicated parents, EEP personnel, and friends as sources of pressure. However, a much larger number, or close to half of the study sample (46%), said that such pressure came from the self (Noble et al., 2007). In our current study, we asked a related question about how important it was for participants to live up to parental and their own expectations in life. Less than half of respondents (37.9%) indicated that it was *very important* or *important* to live up to parental expectations, compared to an overwhelming majority (95.3%) who indicated that it was very important or important to live up to personal expectations.

Employment Outcomes

Most of our participants 154 (80.2%) reported that they were currently employed (see Table 8). Seventeen (11.0%) were in part-time positions, 124 (80.5%) were in full-time positions, and 12 (7.8%) indicated other for their employment types. Of those in full-time employment, 78 (50.6%) were permanent in their careers, 35 (22.9%) were in careers but likely to change, and 11 (7.1%) were temporary or not in careers. The individual gross annual income of our sample ranged from less than \$24,999 to more than \$500,000 (see Figure 1). At the lower to middle section of the income spectrum, 22 (14.3%) of our participants earned less than \$24,999, 35 (22.7%) earned from \$25,000 to \$49,999, and 29 (18.8%) earned from \$50,000 to \$74,999. A little over half of respondents earned between \$0 and \$74,999. At the middle to upper end of the income spectrum, 15 (9.7%) earned from \$75,999 to \$99,999, 42 (27.3%) earned from \$100,000 to \$249,999, five (3.2%) earned from \$250,000 to \$499,999, and one (0.6%) earned more than \$500,000. Given their training and degree(s), the majority (78.6%) of respondents felt that their job was appropriate for their level. Nineteen (12.3%) felt that their jobs were somewhat beneath their level and only nine (5.8%) reported that their employment was definitely beneath their level.

TABLE 8
EEP/ACAD Employment

	Employed (n = 154)	
	n	%
Present Job Type		
Part-time	17	11.0%
Full-time, temporary	8	5.2%
Full-time, not in career	3	1.9%
Full-time, in career but likely to change	35	22.9%
Full-time, permanent in career	78	50.6%
Other	12	7.8%
Missing data	1	0.6%
Employer Type		
Business (for profit)	55	35.7%
Business (not for profit)	7	3.2%
Education (K-12)	5	3.2%
Education (post-secondary)	34	22.1%
Government agency	13	8.4%
Industry	4	2.6%
Law firm	7	4.5%
Medical faculty	6	3.9%
Military	1	0.6%
Private practice	1	0.6%
Self-employed	7	4.5%
Social service agency	2	1.3%
Other	10	6.5%
Missing data	2	1.3%

We also asked our participants about their employer type (see Table 8). The top three employer types included business (for profit; 35.7%), education (postsecondary; 22.1%), and government agency (8.4%). Of the 34 employed in education (postsecondary), 10 were working in research or administrative positions, nine were tenure track faculty, five were in postdoctoral positions, and one was a nontenure track faculty member.

Relationships

Participants of the EEP and UWAcad program enter into the university at a younger age than their typical university peers, so the influence of age on factors related to forming satisfying social relationships has been an area of ongoing interest for researchers at the Robinson Center. The majority (138, 71.9%) of respondents reported that they had romantic relationships while at the UW. Of those 138 who had a romantic relationship, 79 (57.3%) reported having relationships with other EEP/ACAD students.

In rank-ordered traits looked for in romantic partners, respondents reported, in order of importance, intelligence (80.7%), similar moral values (55.7%), and emotional stability (50.5%; see Table 9). These results were similar to the findings by Noble et al. (2007), where the highest ranked traits for romantic partners were intelligence, sense of humor, moral values, and emotional stability.

TABLE 9
Rank-Ordered Traits Looked For in Romantic Partners

Trait	n	%
Intelligence	155	80.7%
Similar moral values	107	55.7%
Emotional stability	97	50.5%
Sense of humor	82	42.7%
Physical attractiveness	64	33.3%
Religion	17	8.9%
Financial stability	10	5.2%
Age	6	3.1%
Socioeconomic status	2	1.0%
Race or ethnicity	1	0.5%
Other	23	12.0%
Missing data	4	2.1%

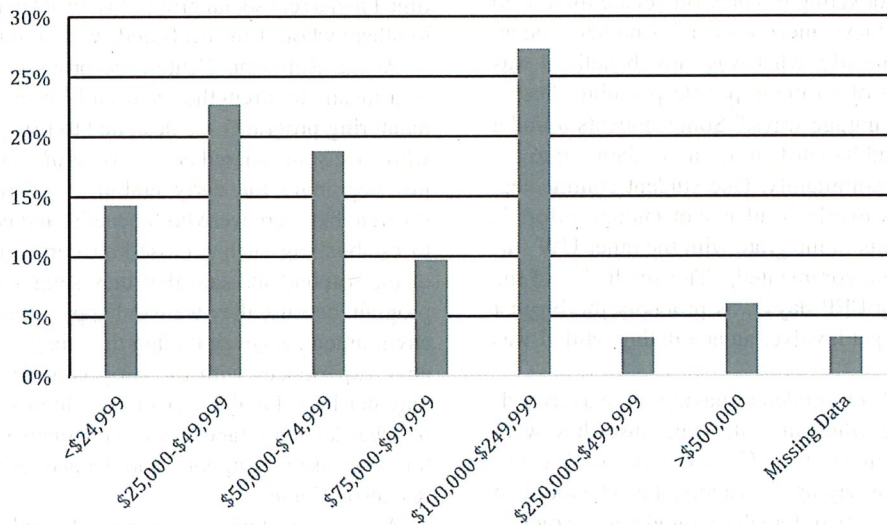


FIGURE 1 EEP/ACAD alumni individual gross annual income (n = 154).

EEP respondents ranged in age of first marriage from 19 to 38, with a mean of 26.5 ($SD = 4.50$), and ACAD respondents ranged in age from 22 to 27, with a mean of 26.3 ($SD = 4.29$; see Table 2). As reported earlier, 41 (21.5%) indicated that they had children. Sixteen (38.1%) had one child, 13 (31.0%) had two, 8 (19.0%) had three, and 3 (7.1%) had four children.

DISCUSSION

The first and most often asked question from parents of students applying to the UW early entrance programs is “How do they fare later in life?” Although this article only reports descriptive statistical results of the electronic questionnaire, the conclusion can be solid and affirmative that most students who responded graduate and lead happy and productive lives according to measures typically used to determine success of university graduates including employment, income, and degree attainment. We intend to analyze and compare our early entrance students to typical UW graduates in future studies. We can also definitively say that most of our students (almost 90%) would choose to enter into early entrance programs again.

Where the results showed more variance was in the area of social relationships. The qualitative data from the open-ended responses shed more light on why some students felt that the program either positively or negatively impacted their social relationships. For the sake of explanation, we note only a sampling of their responses here. Many students commented on the social and academic benefits of having a cohort of talented, highly motivated, and like-minded peers. One student commented, “Having a community of bright peers your age during the college experience was helpful; it can be difficult to relate to older college students in the early years and it’s motivating to know others are there who aspire to learn or achieve more earlier.” Another student commented, “Academically, what was most beneficial was being in the presence of so many people pursuing diverse interests in novel and unique ways.” Some students found a peer group limiting and had difficulties assimilating into the larger UW academic community. One student commented, “The peer group was overly insular. Not enough effort is made to get the students to integrate with the other UW students.” Another student commented, “The small size of the peer group during my EEP days was probably the biggest factor to why I didn’t get involved in any dating while I was in undergrad.”

Males, in particular, responded as having more awkwardness related to dating while in college because they were 4 years younger than most of the UW class peers. One student summed this up by saying, “As a guy, it can be tough to date when the vast majority of females around you are older.”

Another theme that emerged related to the small cohorts in the EEP program and the difficulties of assimilating into

the larger UW academic community. Some students felt highly supported by the staff and the physical surroundings of the Robinson Center, and others felt that the comfort of the Robinson Center hindered their motivation to go outside the Center to develop positive social relationships. One student commented,

Because of the safety of the EEP lounge, I was less motivated to see friends and homework buddies in my major. If I had to do it over again, I would get to know people in my own major better. Part of the issue was that I just felt so young and awkward, though.

One other student who echoed the issue of the cohort stated,

Not sharing a lot of the same life experiences or being at the same life stages as my peers was a bit difficult. I think there is a strong crutch in socializing in the small EEP/ACAD circle that held me back from a more diversified friend circle.

However, on the positive side, one student commented,

The EEP Lounge turned into an unexpected boon for me, as finding peers at all age and progress levels that supported each other, was profoundly novel for me. I learned to deal with intelligent, and often temperamental (or in a few notable cases, psychologically unstable), people as equals in this endeavor. Also, given our incredible diversity of academic interests, I learned an ongoing appreciation for so many different subjects.

Most of the students, however, noted a positive impact socially because of being with their “like peers.” This is summarized in the following quote, “I was around other youth with similar high intelligence and desire to learn. For the first time I had a real social group. My EEP friends introduced me to others whom I’m still friends with to this day.”

At the Robinson Center, we promote the cohort model as a means to strengthen and build peer relationships. The mentoring programs are designed to bring students together who have some shared *collective wisdom* to pass on to those just beginning the early entrance experience. These data showed that there were both benefits and possible detriments to establishing such a close-knit community. Almost 35% of the respondents said that they sought the early entrance program because they were unhappy socially in their current environment. So even though they may have had some negative experiences with the early entrance community, they may not have fared better in their high schools. And much of what students take away with them is dependent upon how they use the supports and the peer groups formed at the Robinson Center.

An overwhelming majority of students came to the early entrance programs to find challenge (approximately 95%). This was quite interesting because over 85% of the

students were identified as being in highly capable programs. This speaks to the need for high schools in general to offer more challenging classes and perhaps more opportunities for students to experience social experiences with students who also seek intellectual challenges. The findings from this study support the overwhelming feeling of students who want to be with intellectual peers. It also raises questions related to the development of more challenging highly capable programs in secondary schools.

LIMITATIONS AND CONCLUSIONS

There were a number of limitations to this study, so we must be cautious with our conclusions. First of all, although we had a solid participation rate (almost 33%) for electronic questionnaires, we do not know why the other 67% did not respond. Therefore, our sample could be skewed to alumni who had either positive or negative experiences. We have no way of knowing whether or not the alumni actually received the e-mails. We also do not know, because we did not have access to the original data set from previous studies, how many of these alumni were actually in the previous follow-up studies. Therefore, examining their responses over time was not possible. As mentioned, the descriptive statistics are only part of the larger study, and we are excited to continue analyzing the results to examine factors such as participants' age, immigrant status, gender, program enrollment years, and EEP/ACAD group membership and their correlations with outcomes such as volunteer practices, education and employment outcomes, and satisfaction with experiences in the program. We will also analyze the qualitative data to look for common themes. Phase 2 of the study includes purposeful sampling and random sampling of the participants for follow-up interviews.

These results, even with the limitations listed above, can be used to infer what may be needed to improve practice. There is a strong indication that early entrance programs need to prepare students not only academically to get ready for college but also socially and emotionally. The study begs for more in-depth analysis of the social and emotional factors that impact students' experiences in early entrance programs. In Muratori's (2007) comprehensive book on early entrance, social and emotional maturity were cited as important factors for students' readiness to succeed in early entrance. Perhaps there need to be more accurate measures to determine social and emotional maturity. What questions need to be asked of students to ascertain their emotional maturity to enter college early? Even more important, once students get to college early, are there specific curricular interventions to focus on social relationships that should be part of the early entrance experience? We encourage others to conduct more research in this area.

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