Inclusive Concurrent Enrollment: A Promising Postsecondary Transition Practice for Building Self-Determination among Students with Intellectual Disability

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Abstract

There have been significant advances in educational programming and postsecondary options targeting acquisition of self-determination skills among students with intellectual disability. This article provides a description of an inclusive concurrent enrollment (ICE) program at an urban public university and describes findings related to student acquisition of self-determination skills necessary for successful postsecondary transition. A sequential explanatory design was employed to examine the development of self-determination among nine participants who engaged in ICE ranging from one to three semesters. Findings indicated that students who participated for at least two semesters demonstrated growth in self-determination, whereas no significant growth was observed for students who participated one semester. These preliminary findings suggest that ICE is a promising transition practice. Further research is needed to examine the impact of program duration on development of self-determination skills to increase college access.

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Despite federal legislation, including the Individuals with Disabilities Education Act (IDEA), that mandates educators to prepare students with disabilities to achieve access to further education and employment options (Mock & Love, 2012), students with ID encounter significant challenges with high school completion and subsequently obtaining competitive employment (Shogren & Plotner, 2012). Although IDEA was implemented to provide special education and related services to students through age 21, there is a dearth of educational opportunities that effectively meet the needs of students with ID as they transition to adulthood (Lee & Will, 2010). To address achievement and employment gaps, the Higher Education Opportunity Act (HEOA) was passed to provide greater access to higher education opportunities for students with ID (HEOA, 2008). Funding associated with HEOA has resulted in the development and expansion of PSE options across the United States (Hart & Grigal, 2010; Lee & Will, 2010). The Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID) is an example of a federally funded initiative that was designed to provide inclusive and comprehensive PSE opportunities for students with ID (Folk et al., 2012). TPSID and other initiatives have expanded inclusive higher education options with a focus on skill acquisition necessary for gainful employment and college access, including self-determination skills, independent living skills,

and other soft skills, that promote college and career readiness. The present article provides a preliminary examination of an inclusive concurrent enrollment (ICE) program on outcomes of self-determination skills among high school young adults as they transition to PSE.

Inclusive PSE Programming

Although PSE opportunities for students with ID are on the rise, there are relatively few options for students with ID to engage in fully inclusive PSE programs (Grigal & Hart, 2010; Uditsky & Hughson, 2012). PSE programs purport to be inclusive, but many continue to provide separate skills-based training through segregated courses and workshops (Uditsky & Hughson, 2012). Higher education institutions that offer inclusive programming maintain the same academic rigor and high expectations for all students, regardless of disability status (Hart & Grigal, 2009). Students with ID can access disability services to receive accommodations, while college instructors should not reduce academic expectations (Hart et al., 2010). Uditsky and Hughson (2012) emphasized the benefit of facilitating connections to the natural supports that universities provide to all students, such as career services, disability services, student mentoring programs, etc., rather than creating exclusive, segregated offerings for students with ID.

Outcomes from inclusive PSE and high school programming have been positive in preparing students for employment and careers (Causton-Theoharis, Ashby, & DeClouette, 2009; Folk et al., 2012; Uditsky & Hughson, 2012). Self-determination, which includes self-awareness, self-advocacy, goal setting, problem solving, and decision making, is a fundamental skill that is required for successful postsecondary transition among youth with ID (Landmark, Ju, & Zhang, 2010; Wehmeyer et al., 2007; Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013). Several evidence-based interventions and education planning models that focus on self-determination skill attainment have been effectively employed in postsecondary transition (e.g., Wehmeyer et al., 2007). Two examples include the Self-Determined Learning Model of Instruction (SDLMI), a curriculum that focuses on goal attainment through engaging in self-directed activities (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000), and Whose Future is it Anyway? (WFA), a curriculum designed to promote active student engagement in PSE (Wehmeyer, Lawrence, Garner, Soukup, & Palmer, 2004).

There is growing evidence suggesting that participation in self-determination interventions is linked to enhanced overall self-determination among students with ID (Wehmeyer et al., 2013). Self-determination status at high school exit has also been associated with greater community engagement and positive post-school outcomes (Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2015). Considering these positive outcomes observed among youth with ID, the opportunity to develop self-determination skills should be infused in PSE programming, such as through engagement in inclusive education and community-based activities rather than special, separate settings. In a preliminary investigation, Hughes, Cosgriff, Agran, and Washington (2013) found that high school students with ID from a high-poverty school who had limited exposure to inclusive classroom education and community-based transition activities reported significantly less use of self-determination skills compared to students with ID from middle-income communities with greater access to inclusive settings. These findings suggest the importance of greater participation in inclusive school and community environments and promoting self-determination, particularly in urban, high-poverty locations where employment

and recreational resources may be limited (Hughes et al., 2013; Washington, Hughes, & Cosgriff, 2012).

Purpose of Study

Although funding at the national and state levels (e.g., TPSID) has increased inclusive PSE and dual high school/college enrollment programming (e.g., Folk et al., 2012), there is minimal documentation of outcomes of such programs to date. The purpose of this study is to explore learning outcomes for students enrolled in an ICE program offered at an urban public university. The article will provide a description of the development and implementation of the ICE program and describe findings related to student outcomes on the acquisition of self-determination skills, including, autonomy, self-confidence, and self-advocacy. The following two research questions guided the investigation: Did participants' engagement in the ICE program contribute to the development of self-determination? If so, in what ways?

Method

Participants

As presented in Table 1, nine students engaged in the ICE program, ranging from 1-3 semesters. Six students completed 1 semester; 1 student completed 2 semesters; and 2 students completed 3 semesters. The participants included 6 male (who completed 1 semester) and 3 female (who completed 2-3 semesters). Of the 3 female students, 2 identified race/ethnicity and language(s) spoken as African American, English-speaking and 1 Haitian, bilingual Creole- and English-speaking. Of the 6 male students, 3 identified as African American, English-speaking, 1 Haitian, bilingual Creole- and English-speaking, 1 Latino, bilingual Spanish- and English-speaking, and 1 White, English-speaking.

Table 1
Individual Level Participant Data

Variable	*n*
Gender	
Male	6
Female	3
Length of Participation	
3 semesters	2
2 semesters	1
1 semester	6
Race/Ethnicity	
African American	5
Haitian	2
Latino	1
White	1
Language	
English only	6
English and Creole	2
English and Spanish	1

All participants concurrently attended a local urban public high school and audited 1 course per semester at the local urban four-year university. Students' age ranged from 18-20. Participants were diagnosed with a severe cognitive and/or learning disability and were unable to achieve the competency determination necessary for graduation by passing the State's comprehensive exam. The exam is given to all public school students to measure performance based on the State's curriculum framework and learning standards. No additional educational or diagnostic information was provided to the institution of higher education (IHE) due to privacy and confidentiality agreements with the local educational agency (LEA).

Measure
Participants completed the Adolescent Self-Determination Assessment- Short Form (Wehmeyer, Palmer, Shogren, & Seong, 2014) at least twice during attendance in ICE to measure growth in self-determination skills. The co-investigators at the IHE administered the survey in a single sitting, meeting individually with each participant, lasting approximately 45 minutes per session. During administration, researchers followed participants' preference for survey completion, whether through dictation or done independently. In addition, upon exit from the program, the three participants who engaged in ICE for greater than one semester engaged in an interview with co-investigators in collaboration with education coaches from the LEA.

Adolescent Self-Determination Assessment- Short Form. The Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014) was used as a briefer alternative to The Arc's Self-Determination Scale (Wehmeyer & Kelchner, 1995), with all items assessing self-determination. The Arc's Self-Determination Scale has been field-tested and validated for use with students with cognitive and developmental disabilities. Cronbach's alpha for the full scale was .90, and alpha levels for 3 of 4 domains were: autonomy (.90), psychological empowerment (.73), and self-realization (.63). No reliability is available for the self-regulation scale due to the open-ended response format of items (Wehmeyer, Kelchner, & Richards, 1996). The Adolescent Self-Determination Assessment- Short Form also contains 4 sections that assess self-determination, totaling 28 items, including Likert-type scale items and short answer items (Wehmeyer et al., 2014). The 4 sections assess self-determination and include the following domains and subdomains: (a) autonomy (7 items); (b) self-regulation, containing 2 subdomains, interpersonal cognitive problem solving (6 items) and goal setting and task performance (1 item); (c) psychological empowerment (7 items); and (d) self-realization (7 items). Sample items on the autonomy domain include: (a) I plan weekend activities that I like to do; (b) I write letters, notes, or talk on the phone to friends and family; (c) I decorate my own room. Items have 4 possible response choices: I do not even if I have the chance (0); I do sometimes when I have the chance to (1); I do most of the time when I have the chance to (2); and I do every time I have the chance to (3). Twenty-one points are possible, with higher scores representing higher levels of autonomy.

The self-regulation, interpersonal cognitive problem solving subdomain includes story-based items. The student is given the beginning and ending of stories and is required to write (or dictate) solutions that would complete each scenario. Responses are rated on a scale of 0-2 points based on the effectiveness with which each solution resolves an identified problem in each story. The self-regulation, goal setting and task performance subdomain also includes a 2-part item on transportation. The respondent is asked to identify a transportation goal and steps required to

reach the goal. Responses are scored 0 (i.e., no identified transportation goal) to 3 (i.e., 3 to 4 steps are identified to reach the goal). Higher scores in self-regulation represent greater interpersonal cognitive problem solving and goal/task attainment skills.

The psychological empowerment domain includes items that demonstrate self-empowerment, including beliefs regarding ability, perceptions of control, and expectations of success. Students are presented 2 statements and are asked to select the statement that best describes them. For example, "I do not make good choices. I can make good choices." Items are scored a 0 or 1, and higher scores represent a greater sense of psychological empowerment.

The self-realization domain includes items that measure self-knowledge and self-awareness. Items are scored a 0 or 1. Respondents are asked if they disagree or agree with statements, such as, "I know what I do best." Higher scores represent greater self-realization, and total scores can be calculated using converted scores and percentile ranks (Wehmeyer et al., 2014). Overall total scores on the survey correspond to varying levels of self-determination.

Interview. The interview guide was developed based on the 4 domains assessed in the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014). Interview questions followed a semi-structured format to give participants opportunities to direct the conversation and expand our understanding of self-determination acquisition. The following sample questions illustrate the reflexive nature of the interview: (a) Tell us about the process of choosing classes. How did that go for you? (autonomy domain) (b) What was it like going through the process of applying for jobs? (self-regulation and goal setting domain) (c) What was it like to take classes here? How confident did you feel? (psychological empowerment domain) (d) You mentioned that you see yourself here at college as your future goal. Can you tell us a little more about that? (self-realization domain)

Interviews were conducted to maximize participants' comfort and sense of ease. As such, interviews were completed in a conversational manner over lunch with two interviewers, and students were encouraged to invite their educational coach if preferred. In all cases, students' educational coach participated and periodically offered support during the interview to respond to questions. Support consisted of enhancing understanding of questions and aiding in recalling experiences. Participants were not pressured to respond to items and were given as much time as needed, with interviews lasting two hours on average. The two interviewers worked in applied research settings with emerging adults with disabilities in clinical, classroom, and university settings and were serving as project coordinators of the ICE program. The participants had many previous interactions with the investigators as project coordinators, which aided in facilitating the interview process and building a sense of comfort.

Procedure
The ICE program at a large urban, public university (IHE) was implemented in partnership with a large urban, public school district (LEA). Approval to conduct research with students in ICE was obtained by the Institutional Review Boards of both the LEA and IHE, whereby all research processes were approved for the present study. Informed consent was obtained from all

participants during individual meetings with researchers and educational coaches. Informed consent included survey administration as well as engagement in interviews.

The ICE partnership was designed to provide transition personnel at the high school and faculty at the university with knowledge and support to offer students with ID the opportunity to participate in academic courses and social life of the university side-by-side enrolled college students. The ICE program at the IHE followed an inclusive model, whereby students with ID engaged in the university community similar to other college students and received supports through educational coaches and mentors (Folk et al., 2012; Hart & Grigal, 2010).

Participants could make use of student services and campus facilities available to all students, such as Disability Services for course accommodations and Career Services for employment assistance. Academic 504 course accommodations were provided through the IHE's Center for Disability Services. All students chose to disclose their disability and registered with the IHE's Center for Disability Services. Accommodations were provided based on student needs, including proctoring services on exams, preferential seating, and extended time on assignments and tests. Students in ICE participated in orientation day with all incoming university students. The LEA educational coaches served as transition specialists to assist with postsecondary planning. At the IHE, a designated Student Services advisor worked with participants to provide academic advising, a service available to all university students.

Participating students audited a variety of courses, such as, creative writing, art history, piano, voice, sociology, literature, music, criminology, American history, and graphic design. In collaboration with educational coaches from the LEA, the IHE's academic and career advisors helped students with course selection related to personal and future career and PSE interests. If students met the course prerequisites, they could register for credit, albeit none of the students in ICE met requirements to take courses for credit.

To encourage social engagement on the campus, students in ICE were paired with an undergraduate peer mentor. The mentor's role involved helping students in ICE to explore extracurricular activities and to encourage use of student IDs to access discounted community events. Mentors and students in ICE typically met one hour weekly and engaged in a variety of activities on and off campus, including visits to the game room, greenhouse, gym, pool, museum, and meeting for lunch or coffee. Initially, mentors suggested activities students, but eventually, they would mutually choose ways to spend time together, with mentors encouraging mentees to express interests and make independent choices. In addition, returning students to ICE served as mentors for newly admitted peers.

Participants had to commute to the IHE independently using public transportation. To support this capacity, educational coaches from the LEA designed and implemented an individualized travel-training protocol. The travel training followed a scaffolded model whereby educational coaches identified each student's travel capacity and goals and then created structured activities to transition students to travel independence. The process included modeling the desired behaviors, breaking the behaviors into simple steps, monitoring progress toward independence, removing supports as students demonstrated autonomy, and independent commuting. Coaches also integrated safety awareness (i.e., Where is the best place to stand? What individuals can I

approach for help?) and problem-solving (i.e., What if I miss my stop? What if I lose my bus/subway pass?) into the travel training.

The IHE and LEA jointly provided outreach to families. Families were invited to all IHE events, such as information and orientation sessions, the same events that parents of all prospective and enrolled students receive invitations to attend. In addition, the LEA educational coaches and IHE personnel attended jointly arranged meetings to answer parents' questions regarding the ICE partnership. Community engagement was also central to ICE, with students lobbying State representatives for continued program funding.

In addition to inclusive coursework, opportunities for community-based and competitive employment options were made available through locally sponsored partnerships. Campus Career Services, in collaboration with LEA educational coaches, provided supports to assist students with transition goals. Through grant-funded programs, the IHE provided on-campus paid employment options for students in ICE, allowing participants to choose an area of interest and apply for work-study positions. Students who participated in ICE greater than one semester applied for and secured on-campus paid employment in positions similar to work-study placements for undergraduates across campus, such as in the printing and the greenhouse. Campus Career Services personnel provided support in developing a resume and holding mock interviews. Participants interviewed with hiring departments and filled out applications for employment. Students had a set work schedule each week, typically structured to occur before or after course meeting times. Students worked approximately 5 hours per week each semester.

Participants spent at least two and a half hours on campus (the length of time for class attendance) over either a two- or three-day schedule per week. Beyond acquisition of travel independence, participants did not receive additional self-determination training at the high school. Moreover, although several components of the ICE program purported to develop self-determination, including interaction with mentors, classmates, and professors, engagement in work, and participation in campus activities, no separate or specific training regarding self-determination was provided at the IHE. Activities beyond coursework led to many of the students spending up to three to six hours weekly on campus beyond scheduled course hours.

An ICE leadership team, comprised of LEA educational coaches and IHE student support personnel, met regularly to discuss transition policies, practices, and procedures needed to maintain inclusive PSE opportunities. The ICE leadership team developed an infrastructure to ensure success in academic and social endeavors (e.g., registration, mentoring network, advising, accommodations, career development). Universal Design workshops were provided for IHE faculty to assist with designing appropriate instructional strategies and in arranging meaningful learning experiences. An advisory council comprised of community stakeholders and adult disability services met periodically to help facilitate the ICE initiative, to maintain an inclusive model, and to focus on postsecondary to employment transitions. In addition, at the conclusion of each semester, students met in a group with implementation personnel (LEA, IHE, and other stakeholders) to reflect on their experiences during the semester and provide feedback.

Data Analysis
A sequential explanatory design was employed to examine participants' development of self-determination skills, which included the collection and analysis of qualitative data to expand upon preliminary quantitative findings (Creswell & Plano Clark, 2011). In the initial phase of the study, we examined the development of self-determination using the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014). The survey was administered at the start and end of the first semester of engagement for all 9 participants in ICE and subsequently upon exit for 3 of the 9 participants who engaged in ICE for at least 2 semesters. We calculated mean survey scores and conducted non-parametric Friedman and Wilcoxon signed-rank tests to examine whether participants' level of self-determination changed as students engaged in ICE. Non-parametric tests were employed due to the small sample size and effectiveness in testing hypotheses of small samples (Field, 2013). Analyses were conducted using SPSS Version 21.0.

Upon exit from the program, follow up interviews, using qualitative content analysis (QCA; Schreier, 2012), were conducted with students who participated in ICE for at least 2 semesters and demonstrated greatest growth in self-determination on the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014). Using QCA allowed us to further explore themes associated with self-determination in relation to constructs measured in the survey to understand in what ways participants may have developed self-determination. QCA was selected as a framework for data analysis and interpretation because it allowed us to build a coding frame that was consistent with the domains of self-determination measured within the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014).

Results

To assess outcomes of engagement in ICE on participants' development of self-determination, Adolescent Self-Determination Assessment- Short Form mean total scores were calculated and converted into standard/percentile scores following the scoring procedures manual (Wehmeyer et al., 2014). The Wilcoxon signed-rank and Friedman tests were conducted to examine (a) pre and post differences after one semester of participation in ICE and (b) change across 3 points, pre semester 1, post semester 1, and upon exit from ICE, respectively. Table 2 provides standard/percentile mean self-determination scores for all 9 participants completed at pre and post first semester of engagement in ICE.

Table 2

Mean Scores on Adolescent Self-Determination Assessment- Short Form for All 9 Participants in ICE Pre and Post First Semester of Completion

Administration Point of Short Form	*Raw M (SD) Score*	*Standard M (SD) Score*	95% CI	Percentile Rank	*n*
Pre semester 1	28.00 (4.47)	85.78 (10.01)	[78.0, 93.5]	19.5	9
Post semester 1	28.67 (4.12)	87.44 (9.14)	[80.4, 94.5]	22.6	9

As depicted in Figure 1, change in self-determination scores from pre (*Mdn* = 84) to post (*Mdn* = 86) semester 1 completion was not significant (Z = -.421, *p* = .674).
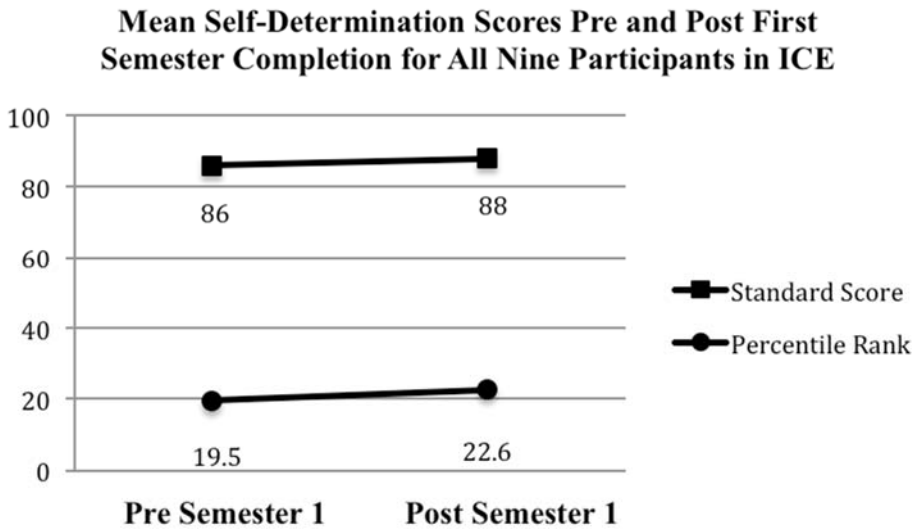
Figure 1

Figure 1. Figure one depicts mean self-determination scores assessed by The Adolescent Self-Determination Scale- Short Form for all 9 students who participated in the ICE program. No change in mean self-determination scores was observed.

In using the Friedman test to evaluate whether there was a significant growth in self-determination for the 3 participants who engaged in ICE for at least 2 semesters, mean self-determination scores increased over time (i.e., from pre semester 1, post semester 1, to exit) as demonstrated in Table 3 and depicted in Figure 2. However, the observed increase at pre (*Mdn* = 84), post (*Mdn* = 88), and exit (*Mdn* = 101) was not significant, with p = .06, $\chi^2(2)$ = 7.897. Effect sizes of mean differences on the Adolescent Self-Determination Assessment- Short Form across assessment points using Wilcoxon signed-rank post hoc tests with a Bonferroni correction were large, ranging from r = .77 to r = .94.

Table 3

Mean Scores on Adolescent Self-Determination Assessment- Short Form for Participants in ICE at Least 2 Semesters

Administration Point of Short Form	*Raw M (SD) Score*	*Standard M (SD) Score*	95% CI	Percentile Rank	*n*
Pre semester 1	28.00 (4.58)	86.00 (10.15)	[60.8, 112.2]	19.5	3
Post semester 1	30.33 (2.31)	91.00 (5.20)	[78.1, 103.9]	26.8	3
Exit	34.33 (2.08)	100.00 (4.58)	[88.6, 111.4]	50.0	3

Figure 2
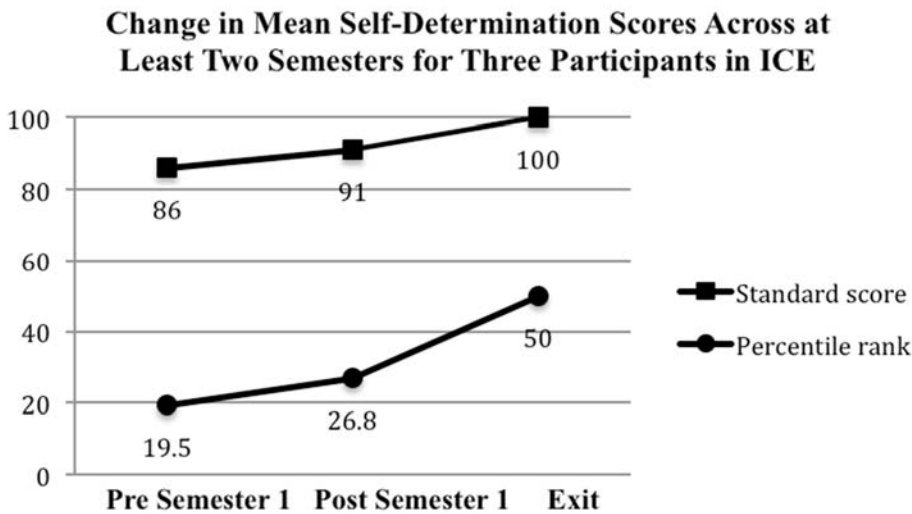
Figure 2. Figure two depicts mean self-determination scores assessed by The Adolescent Self-Determination Scale- Short Form for 3 students who participated in the ICE program for at least 2 semesters. Mean self-determination scores increased over time.

Considering the increased growth in self-determination among the 3 participants with the longest period of engagement in ICE at the *p* = .06 level, we invited these students to participate in individual interviews to better understand their experiences and in what ways they may have developed self-determination. The first steps of analysis included transcribing recorded interviews and developing a coding frame that was consistent with the constructs measured in the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014), containing 4 main categories: autonomy; self-regulation; psychological empowerment; and self-realization. Next, we reduced our transcribed data into units of coding through choosing material relevant to our coding frame and then structured that data into meaningful subcategories using structural coding (Saldaña, 2013). Deductively, we examined transcribed data drawing upon the work of Wehmeyer et al. (2007) to identify material related to participants' development of self-determination. Inductively, we reviewed the data to see what additional themes emerged. We

then defined each of the subcategories, explored their relation to each other, and tested our coding theme by double-coding the data and identified subcategories.

To prevent researcher bias, one of the three investigators reviewing transcriptions was not involved in conducting the interviews with participants. To ensure trustworthiness, two of the investigators independently reviewed the transcriptions for inter-rater agreement and followed an iterative consensus process until they reached consensus (Kvale & Brinkman, 2009). Triangulation of data resulted in final revisions to our coding frame and theme identification to represent participants' experiences.

Autonomy
Participants' responses to interview questions in relation to the main category of autonomy were organized into two subcategories: (a) increasing independence and (b) taking responsibility. All 3 participants talked about how engaging in ICE increased their sense of independence, exemplified by learning how to travel to and from campus, engaging in academic and career self-exploration, and feeling a sense of "freedom" and being "grown up…to grow and develop what I need to achieve." One participant shared what independence meant to her.

> You can learn to be independent and not rely on Mom anymore. And I love my mom, but I don't want to rely on her, like lean on her shoulder like glued to her…So I said alright but I'll have you for moral support, but I want to still learn independence.

She goes on to share how she demonstrated independence through traveling to and from campus.

> I did not know anything about the train or the bus at all, when I was before. Then my mom like babied me most of the way, and like until I got tutoring in school like my mom said "what you're taking the train?"…She said, 'oh call her when I get to the train station and call her when I get on the bus.' And I remember one time and I forgot…'cause I was so confident to get on the train by myself, and she called me on the bus when it was really crowded, and I was like, 'hello,' and she said, 'Where are you?' 'On the bus.' 'Like you didn't call me.' 'Oops!'

Another participant talked about how she exerted independence through engaging in academic self-exploration. When asked how she became interested in writing, she responded: "Because I need help with writing, and I need to think about I always wanted to write my own thoughts." She also described becoming more independent in decision making when asked about the process of applying for employment. "At first I was a little nervous…like oh we get to choose what job we going to get, so I chose 'cause I heard animals. Oh animals. Real life animals, so I chose to work in the greenhouse." Another participant also demonstrated independence through employment selection.

> But when the lady said it…the pay isn't always the best. But um I'm like, I don't care about the price, I don't care about the payment. I have to be enjoying myself. If I'm not enjoying myself, this is called work, and I don't want to do work. I wanna call it fun. So, it's fun for me to help somebody answer the phone.

The subcategory taking responsibility was also identified within the main category autonomy. For example, one participant shared how she took charge of finding her way around campus without relying on her educational coach.

> When I first came to campus I almost got lost. I had to ask Ms. Jones which way, which way was the building because I was lost. I was worried I might go the wrong ways or back and forth, but I learned my way around this time without calling Ms. Jones 24/7.

Another participant talked about taking responsibility through engaging in self-advocacy and reaching out to her vocational rehabilitation counselor.

> So like she said, OK we can have a meeting Tuesday…So we talked about the train, we talked about my books…And [the counselor said] 'you know I'm going to tell you something amazing. You're the only student in your class that actually came and called me and made an appointment with me.'

Overall, through participation in ICE, students demonstrated an increased sense of autonomy, specifically in the areas of increasing independence and taking responsibility.

Self-Regulation
Within the main category of self-regulation, participants' responses were organized into 2 subcategories: (a) goal setting and task performance and (b) time management. Participants discussed their development in goal setting and engaging in task performance related to academic classwork and traveling. For example, one participant shared how she learned different tasks to improve her academic performance.

> …To think carefully before I write the answer…that way I could just follow the examples where my professors was showing everybody about during the college class...and see words so I can write notes, a little bit more and, and so I can manage enough to take that knowledge, and so I can get better at it.

Another participant talked about how she was able to build upon previously learned steps she engaged in to become successful in traveling to and from campus.

> It worked for me…because I traveled…in the morning to the first station then all the way up to the train station, [and] all the way up to the [next train station], then I just take the shuttle bus all the way to campus, and then when I get finished, I started coming back to my high school.

Participants also talked about skills they developed in time management with regards to traveling to and from campus.

> I'm gonna be late…And like alright so I'm gonna have to wake up early, so I woke up at 5:45, and…I'm gonna test this out and my mom said, 'that's too early.' And like, 'no it's not, I'm telling you, you drive, I have to take the train!'...And so I learned that taking the A Line straight to the 31 to the A Line trying to go all the way to college is not going to

work. So I said you know what, I'm going to take the B Line to the A Line, even though that seems like a silly accommodation for myself, like it works! I'm more early.

Considering the urban location of the university and need to rely on public transportation, participants demonstrated significant growth in setting goals and carrying out the necessary steps to travel to and from campus. Participants also demonstrated self-regulation through effective time management, an important skill necessary to achieve postsecondary success.

Psychological Empowerment
Within the main category of psychological empowerment, 2 subcategories were identified in participants' responses: (a) increased sense of self-confidence and (b) perseverance. Participants talked about experiences in the ICE program and how their sense of self-confidence increased. For example, one participant shared how she applied her learning to other related educational experiences.

> I learned that you like still have to do the same process, 'cause I went to the campus disability center and I needed help for a book at the time. I was like kind of nervous, like I hope I can do this correctly. But um when I finally did it through your school I was more confident, like 'oh great I can do it!'...And when I was applying for community college…I have a class that needs to have a book, I know I'll be prepared, same thing, and I feel more confident.

Another participant expressed self-confidence in her ability to improve academic performance in college coursework.

> The way I see college people do, the way how they push themselves studying for tests and their classwork. And I feel like…a little bit…I feel like my thoughts don't understand the basics other than when I first came here...That if they can try to memorize it, maybe I can try to memorize it as well....And, even if on an exam you're just gonna try your best and try memorizing a little bit more.

One participant reflected on her overall experience on campus contributing to an increased sense of self-confidence.

> I see myself at being here at college. It helps me gives me self-confidence. Letting me learn whatever I want to learn. It helps me to focus, and helps me to go beyond my imagination like for writing 'cause the class I took today here writing literature was fun for me. I get to use my imagination.

The second subcategory of perseverance was identified within the main category of psychological empowerment. Participants talked about learning from mistakes and persevering despite obstacles. For example, one participant shared how she handled peer feedback, stating, "It feels good. Some people like it and some people write comments on our papers to see what was missing. Some of them say I do a good job. And some of them just mark the words I misspelled." Relatedly, she shared how trying hard (persevering) at school will help to get a good job, stating, "I wanna become a lawyer. And lawyers have to learn how to write but if a

lawyer doesn't work for me, then poetry, writing poetry for kids will be my goal." Another participant shared the importance of persevering on the job despite not always enjoying all tasks.

> I learn how to work hard and to shred paper and to do my best, and listen to my boss, in case he teaches me how to do stuff...Oh I thought I was going to sharpen pencils, work with the secretary, kind of, help them move their stuff their first day, I was stuck here sharpening pencils and I was like ah but I go with the flow.

Overall, participants demonstrated growth in the area of psychological empowerment, particularly through acquiring an increased sense of self-confidence and perseverance.

Self-Realization
Within the main category of self-realization, 2 subcategories were identified: (a) confidence in abilities and (b) feelings of pride. Participants expressed confidence in abilities, through overall attitude toward coursework and completing academic work. One participant talked about writing assignments and feeling confident about the stories she writes.

> Writing story is fun. It's like using my imagination…Even though it had to be fiction or non-fiction we can write it anyway we like. That's what I like about my teacher; we can write anything we like. Just make sure it's the story that you really like. Some of the stories that I write I like, and some of them I don't, but I still show it anyways.

Participants also expressed feelings of pride as they reflected on experiences in ICE. One participant shared an interaction she had with her grandmother reflecting pride.

> When I go to my grandma's house, she always used to praise me like 'Oh, look at my college student!'...So, I like to be with a lot of students even though I was the youngest one in the classes I was in. It still felt really amazing. I got confident and wanted to go to college so. And, I'm glad I'm in college now.

Another participant talked about her transformation and feelings of pride.

> I think about myself as like, I feel changed...In a collegeable way. And I feel like, I already like, I passed all my high school, like I finished high school and my...thoughts of my knowledge grew, grew like a lot and I was proud of that.

Through participation in ICE, overall the 3 participants demonstrated an increased sense of self-realization, specifically through developing confidence in abilities and feeling a sense of pride.

Discussion

There have been significant advances in educational programming and postsecondary planning options targeting the development and improvement of self-determination skills among students with ID (e.g., Palmer et al., 2012; Wehmeyer et al., 2007; Wehmeyer et al., 2011; Wehmeyer et al. 2012). Researchers have demonstrated positive relationships between self-determination, academic achievement (Gaumer Erickson, Noonan, Zheng, & Brussow, 2015), employment

outcomes (Martorell, Gutierrez-Recacha, Pereda, & Ayuso-Mateos, 2008), life satisfaction (Miller & Chan, 2008), and quality of life (Lachapelle et al., 2005). Considering the positive outcomes, it is important to provide students with ID the opportunity to engage in PSE programming that supports the acquisition of self-determination.

Providing students with ID options to engage in PSE is one helpful way to support this development (Causton-Theoharis et al., 2009; Folk et al., 2012; Uditsky & Hughson, 2012). The present investigation assessed the acquisition of self-determination skills among high school students with ID who engaged in an inclusive concurrent enrollment (ICE) program at an urban higher education institution. Findings from sequential explanatory analyses of self-determination skills assessed by the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014) and evaluated via interviews, suggested an increase in self-determination for participants who engaged in the program for at least two to three semesters. Students who engaged in ICE for one semester did not demonstrate significant growth in self-determination as assessed by the Adolescent Self-Determination Assessment- Short Form (Wehmeyer et al., 2014).

An increase in mean self-determination scores was observed for students ($n = 3$) who engaged in ICE for at least two to three semesters at the $p = .06$ significance level. To further investigate this growth, using QCA of semi-structured interviews conducted with the three students allowed us to identify acquisition of self-determination skills in four areas, including autonomy (i.e., increased independence and taking responsibility), self-regulation (i.e., goal setting/task performance, and time management), psychological empowerment (i.e., increased sense of self-confidence and perseverance), and self-realization (i.e., increased sense of confidence in abilities and feelings of pride). Specifically, engaging in ICE increased participants' sense of independence related to academic and career self-exploration as well as taking responsibility through self-advocacy (autonomy). Participants discussed improvement in goal setting and engaging in task performance related to academic classwork and traveling (self-regulation). They also expressed an increased sense of self-confidence and perseverance to improve academic performance in college coursework (psychological empowerment), and shared feelings of pride and confidence in abilities to reach college goals (self-realization).

These findings demonstrate preliminary support for inclusive higher education programs insofar as promoting the acquisition of self-determination for students with ID—a finding that was also identified by Folk et al. (2012) who observed improved self-determination among students with ID enrolled in a dual enrollment program. There is also growing support for and acceptance of inclusive programming at the higher education level (Griffin, Summer, McMillan, Day, & Hodapp, 2012). In the present study, participants identified feelings of increased self-confidence and a sense of pride engaging in college activities and coursework and described how participation impacted academic and employment preparedness.

Furthermore, the setting where students engaged in the ICE program is unique because of its urban location and diverse student body. Students in ICE were required to commute by public transportation and had to learn to travel independently. Travel independence was an area of development that likely facilitated students' sense of self-confidence, self-advocacy, and pride and is an important skill in furthering college and career readiness. The university's diverse student body, while not assessed, may have contributed to participants' sense of belonging and

comfort. The students who participated in ICE came from inner city and minority high schools. Having the opportunity to engage in postsecondary planning activities and build self-determination are critical experiences for all students, particularly for students with ID who attend high-poverty schools (Washington et al., 2012).

Limitations
Preliminary findings regarding the development of self-determination via engagement in ICE are limited by several factors. First, although the university setting and location likely aided in the development of self-determination, students in ICE had limited time available to engage in campus activities due to high school obligations. Considering the nature of concurrent enrollment programs between high schools and higher education institutions, development of self-determination may require greater than one semester of participation. Close collaboration between the IHE and LEA can help to bridge gaps in college attendance and facilitate students' engagement in educational activities at the high school that promote self-determination.

Second, the small sample size limits generalizability of findings. Although having a small number of participants engage in ICE facilitated program implementation and ensured students' needs were met, the small sample precluded the ability to examine other variables that may affect development of self-determination, such as level of cognitive and intellectual functioning. It may be that the students with the longest duration of participation were higher functioning than their peers who participated in ICE for only one semester. The present investigation did not examine such variables related to IQ or other assessments of functioning. Relatedly, the LEA was not permitted to disclose information pertaining to level of functioning other than that participants had not passed the State standardized exams and had been served under an IEP for developmental or intellectual disability. Further research with a larger sample could examine the potential effects of such variables, as well as others (i.e., parent support, community support, income, program factors), on program effectiveness.

Implications for Research and Practice
College environments provide vast opportunities to practice self-determined behavior. Students in ICE have access to a wide array of educational, vocational, and extracurricular activities that are typically not available in most high schools, particularly in urban settings where resources may be limited. Participants had access to peer mentors and support from educational coaches, permitting development of greater autonomy and self-confidence to navigate the college campus and explore postsecondary options through part-time employment. Considering the positive preliminary outcomes on student development in self-determination, more research on outcomes of ICE programming is warranted. Through further investigation, researchers could examine longitudinal outcomes of engagement in ICE programs on PSE and employment, while identifying ways to meet individualized postsecondary planning needs.

The ICE program described in the present study held to the ideal of being "of" the community rather than being "in" the community. This ideal was achieved by maintaining an inclusive college experience instead of a program separated from mainstream courses and activities. In such an environment, students were included in situations that allowed them to practice skills that foster self-determination and demonstrated growth in autonomy, problem solving, self-confidence, and self-realization. The findings of the present study hold important implications

for building college and career readiness and offer preliminary support for expanding inclusive concurrent educational programming for high school students with ID.

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