Journal of Curriculum Studies Research

https://curriculumstudies.org

E-ISSN: 2690-2788

December 2021

Volume: 3 Issue: 2 pp. 122-147

Campus attitudes toward academic and social inclusion of students with intellectual disability

Douglas Carothers[*1], Hasan Aydin[1], Clarisse Halpern[1]

* Corresponding author
E-mail: dcarothe@fgcu.edu

1. Florida Gulf Coast University, Department of Curriculum, Instruction, and Culture, Fort Myers, Florida, United States.

Article Info

Received: December 5, 2020
Revised: February 14, 2021
Accepted: April 2, 2021

10.46303/jcsr.2021.2

How to cite

Carothers, D., Aydin, H. & Halpern, C. (2021). Campus attitudes toward academic and social inclusion of students with intellectual disability. *Journal of Curriculum Studies Research,* 3(2), 122-147. https://doi.org/10.46303/jcsr.2021.2

ABSTRACT

Empirical evidence suggests college attendance by students with intellectual disability (ID) results in academic and social benefits. However, insufficient literature has explored the attitudes of university constituent groups toward the social and academic inclusion of students with ID before introducing these students to campus. This paper reports the results of a survey given to administrators, faculty, staff, and students of a Southeastern public university to examine attitudes toward including students with ID in academic and social activities on campus. Differences in attitudes were examined based on participants' academic discipline, gender, and role within the academic community. The results indicate that all constituencies had positive attitudes toward the participation of students with ID in college academics. However, significant differences were found based on academic discipline; participants from the College of Education had the most positive attitudes, while those from the College of Business had the least positive responses. Recommendations for future research are included. The article emphasizes the benefits of planning similar post-secondary programs before including students with ID to create a welcoming education environment and provide the best possible education to all students.

KEYWORDS

Campus attitudes; Academic Inclusion; Social Inclusion; Intellectual disability; Higher education

INTRODUCTION

While it may seem impressive that more than 270 colleges and universities host educational programs for adults with intellectual disability (ID) (thinkcollege.net, 2017), that is fewer than 6% of the more than 4,700 two- and four-year colleges in the United States. This lack of inclusive post-secondary educational options is surprising because educating individuals with disabilities in the least restrictive environment has been a key tenet of the Individuals with Disabilities Education Improvement Act (IDIEA, 2004) since its original passage as the Education for All Handicapped Children Act (EHA) in 1974. In fact, nearly 95% of students with ID currently attend school with their peers without disabilities (U.S. Department of Education, 2016). As a result, students whose schooling has been entirely in inclusive settings now increasingly seek post-secondary education in equally inclusive settings; attending college with their peers is the natural educational progression for them (Papay et al., 2018).

College attendance by students with ID results in both short- and long-term benefits. In addition to fulfilling their desire to attend college, short-term benefits include the development of academic, employment, and self-advocacy skills, boosting self-confidence, and assuming the socially respected role of a college student (Hart et al., 2010; Ogurlu & Sevim, 2017). In the longer term, individuals with ID who attend college have higher rates of post-participation employment than those with ID who did not attend college (Butler et al., 2016; Zafft et al., 2004). Moreover, a study in Kentucky found that individuals with ID who attended at least two semesters of college reported better health and less reliance on psychotropic medications, higher rates of employment, and more friendships than a comparison group of 18–30-year-olds who received state developmental disability waivers (Butler et al., 2016).

Society reaps long-term benefits when individuals with ID attend college. Parisi and Landau (2019) found that students with ID consumed fewer government support services after leaving college, saving taxpayers' money. A five-year review of federal records found that individuals with ID who attended post-secondary education received $77.00 per month less in SSI payments (Sannicandro, 2016). Further, because health care costs are lower for employed people (Goodman, 2015), programs that enhance employability skills can reduce government health care expenses. Several studies have shown that employed individuals with disabilities have lower Medicaid expenses than those who are unemployed (Chambless et al., 2010; Hall et al., 2013).

Others on campus also benefit when individuals with ID attend college. Westling et al. (2013) examined changes in attitudes of college students after individuals with ID were included on a college campus. They found that 83.1% and 91.5% of respondents agreed or strongly agreed that including students with ID can benefit other students in class and in campus life, respectively. Similarly, another study found that faculty perceive the inclusion of students with ID in classes as beneficial for all students because they asked unexpected questions or asked questions and made observations that other students may not have been willing to make

(O'Connor et al., 2012). The study also revealed that having students with ID in class led faculty to modify instructional methods to more student-centered approaches that benefit all students, including assessing students' background knowledge, over-explaining concepts, and following lectures with question and answer sessions (O'Connor et al., 2012).

Regrettably, even parents and professionals rarely understand or share the belief that students with ID belong in college (Eisenman & Mancini, 2010; Haffner et al., 2011; Sheppard-Jones et al., 2015). Restrictions on the social activities of individuals with ID occur because practitioners do not always support their active social participation (Santos, 2014). Further, acceptability and opportunities for interaction can be adversely impacted by society's perception of "people as 'clients' or 'consumers' of services controlled by others, rather than as 'citizens,' 'neighbors,' or other generic roles that might give a quite different perception of the nature of one's personal rights and empowerment in the community" (Keith & Bonham, 2005, p. 801). As a result, an individual with ID's quality of life may be impacted less by the presence of the ID than by the individual's access to social opportunities and needed supports (Simoes & Santos, 2016). In fact, more positive societal attitudes toward individuals with ID can result in their having a better quality of life and influence laws and public policies that impact their lives and opportunities (Westling et al., 2013). These findings illustrate the importance of "breaking the cultural barrier that always said young adults with intellectual developmental disability could not go to college" (Baker et al., 2018, p. 14).

Intergroup contact theory suggests that increasing positive interactions between groups can reduce social bias, especially when the individuals know each other and are working toward a common goal (Allport, 1954). A recent study in a university gym (McAllister et al., 2018) found that bystanders believed discriminatory attitudes and behaviors toward individuals with ID and autism would be reduced, and comfort and perceptions of capability would be increased by increased exposure to individuals with these disabilities. Moreover, in a study involving individuals with a different disability, White et al., (2019) found that student characteristics impact their acceptance of individuals with ASD on the college campus. For example, they found that those with a family member with ASD were more likely than those without a family member with ASD to interact with college students with ASD. They also found that students majoring in physical sciences and engineering were relatively more likely to interact with students with ASD than students studying arts and social sciences. Intergroup contact theory would suggest that familiarity with individuals with ID might also result in greater likelihood of interaction, though again, attitudes might vary depending on personal characteristics as manifested by choice of major.

Social acceptance has a significant impact on college success and college experiences impact life after college. As a result, and to facilitate success during and after college, it is crucial to understand campus attitudes toward the inclusion of students with ID before introducing them to campus life. It is also important for colleges to identify how campus stakeholders conceptualize inclusion and whether the same vision is shared by all (Bumble et al., 2019). Still,

no literature was found regarding the attitudes of constituent groups of a university toward social and academic inclusion of students with ID prior to introducing these students to campus.

METHODOLOGY

A survey instrument (Fowler, 2014) was used to examine the attitudes of various campus constituencies (administration, faculty, staff, and students) concerning the participation of students with ID in college academics and social activities in a college campus in Southwest Florida. The research questions that guided this study were the following:

1. What are the attitudes of various constituencies (administration, faculty, staff, and students) toward the participation of students with ID in college academics?
2. What are the attitudes of various constituencies (administration, faculty, staff, and students) toward the participation of students with ID in social activities on a college campus?
3. Are there any differences in attitudes toward the college academic and social participation of individuals with ID based on participants' academic discipline, gender, or role (administration, faculty, staff, or student) within the academic community?

Data Collection and Analysis

The data were collected using a survey via Qualtrics software. The survey was divided into two parts; one to collect demographic information and another consisting of questions to assess attitudes toward the inclusion of individuals with ID on a university campus (Fraenkel et al., 2015). In the first part, participants were asked to define their gender, academic disciplines, and role(s) within the university. The second part consisted of 19 questions divided into Academic and Social factors (see Appendix A). The survey was distributed via email to the administration, faculty, staff, and students of a mid-sized public university in Southwest Florida three times in two-week intervals in March and April 2020. Out of the 1460 respondents to the study, 1097 completed the survey.

The data were analyzed using SPSS 22.0 software. In addition to calculating separate means for the scale's Academic and Social dimensions, an overall mean of the scores obtained from all items (General Scale) was calculated (Rea & Parker, 2014). Table 1 displays descriptive statistics for the three mean values calculated using the scores gathered from participants.

The Cronbach's alpha test was carried out for all items for the reliability of the scale data and resulted in a score of 0.87 for 19 items. Because a coefficient of 0.87 is considered very high, it substantiates the reliability of the items.

Table 1
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
General Scale	1101	1.00	5.00	4.15	0.72	-0.90	0.94
Academic	1101	1.00	5.00	3.72	0.57	-0.96	0.82
Social	1101	1.00	4.50	3.22	0.44	-.50	1.00

Participants

Participants from all constituencies (administration, faculty, staff, and students) of a public university in Southwest Florida were recruited via an email that explained the purpose of the study and included a statement about informed consent and a link to the survey administered via Qualtrics. Table 2 shows participants' demographic information in terms of number and percentage of the survey population. The frequency information of participants who completed the scale is provided in the findings of this study. Participation rates were highest for Students (approximately 71.74%), people from the College of Arts and Sciences (approximately 31.60%), and Females (approximately 70.70%).

RESULTS

The General Scale scores of 1101 participants are displayed in Table 2. The mean score for all participants was 4.15, with a standard deviation of 0.72. In the Academic dimension of the scale, the scores of 1101 people were calculated, and the mean score was 3.72 with a standard deviation of 0.57. In the Social dimension of the scale, 1101 scores were calculated, and the mean score was 3.22 with a standard deviation of 0.44.

The mean and standard deviation of the General Scale scores were higher than the means and standard deviations of the sub-dimension scores. The mean score of the General Scale scores was 4.15, which is situated in the range of 3.41 to 4.20. Therefore, attitudes towards the academic and social participation of students with ID at the university were generally highly positive. As for the standard deviation values, the General Scale's standard deviation value was higher than the standard deviation values of the sub-dimensions (see. Table 1: 0.72> 0.57 and 0.72> 0.44). Therefore, the conclusion can be reached that the General Scale scores varied more than the sub-dimensions scores, indicating greater disagreement among participants on the general scale than on either of the subscales.

Table 2
Frequency Statistics

		N	%
What is your role at FGCU	Student	1018	71.74
	Faculty	178	12.54
	Staff	204	14.37
	Administration	19	1.33
	Total	**1419**	**100.00**
With which college are you affiliated?	College of Arts and Sciences	412	31.60
	College of Business	221	16.90
	College of Education	179	13.70
	College of Engineering	81	6.20
	College of Health and Human Services	227	17.40
	Honors College	18	1.40
	Other administration	167	12.80
	Total	**1305**	**100.00**
How do you identify your gender?	Male	361	27.80
	Female	917	70.70
	Transgender	10	0.80
	Other	9	0.70
	Total	**1297**	**100.00**

Additionally, a one-Sample Kolmogorov-Smirnov Test was initially performed in the N-parametric test to decide which tests would be conducted to find answers to the research questions. As shown in Table 3, all significance (p) values were less than 0.05 (p = 0.00), though this value should be greater than 0.05 if parametric tests are to be performed. Despite this, if skewness and kurtosis coefficients are within the range of -1 and +1, then parametric tests will

be performed (Çokluk et al., 2012). Referring to Table 2, the skewness coefficients of the General Scale, Academic, and Social variables were -0.90, -0.96, -0.50, respectively, and kurtosis coefficients were 0.94, 0.82, and 1.00, respectively. Therefore, parametric tests can be carried out in data analysis.

Table 3

One-Sample Kolmogorov-Smirnov Test

	General Scale	Academic	Social
N	1104	1104	1101
Kolmogorov-Smirnov Z	4.56	5.27	4.28
P	0.00	0.00	0.00

Having been justified by the analyses described above, parametric tests were conducted for each of research questions. To answer the first question, Table 4 displays descriptive statistics and frequency counts of participants who completed the Academic sub-dimension of the scale. The mean scores show that all constituencies (administration, faculty, staff, and students) have positive attitudes toward the participation of students with ID in college academics. The mean score of the Staff group was higher than the mean scores of the other groups (4.03 of 5.0). The group with the lowest mean score was Not staff. Because some participants belonged to two or more groups, a univariate analysis was conducted in SPSS 22.0 to determine if the differences were significant. University roles were the independent variables in this analysis and academic means were the dependent variable. Results are displayed in Table 5.

Table 4

The Descriptive Statistics and Frequencies of Each Group

Role	Mean	Std. Error	N
Not Student	3.89	0.12	299
Student	3.81	0.14	805
Not Faculty	3.91	0.12	944
Faculty	3.79	0.15	160
Not Staff	3.71	0.09	928
Staff	4.03	0.17	176
Not Administration	3.75	0.06	1087
Administration	3.97	0.19	17

Table 5
Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	*p*
Corrected Model	7.52	10	0.75	2.30	0.01
Intercept	362.82	1	362.82	1.10	0.00
Student	0.08	1	0.08	0.26	0.60
Faculty	0.02	1	0.02	0.08	0.76
Staff	1.30	1	1.301	3.97	0.04
Administration	0.68	1	0.68	2.07	0.15
Student * Faculty	0.00	0	.	.	.
Student * Staff	0.00	0	.	.	.
Student * Administration	0.00	0	.	.	.
Faculty * Staff	0.00	0	.	.	.
Faculty * Administration	0.00	0	.	.	.
Staff * Administration	0.00	0	.	.	.
Student * Faculty * Staff	0.00	0	.	.	.
Student * Faculty * Administration	0.00	0	.	.	.
Student * Staff * Administration	0.00	0	.	.	.
Faculty * Staff * Administration	0.00	0	.	.	.
Student * Faculty * Staff * Administration	0.00	0	.	.	.
Error	357.78	1093	0.32		
Total	15703.74	1104			
Corrected Total	365.31	1103			

Examination of column *p* of Table 5 may lead to the conclusion that the p-value was not calculated for comparisons of groups of two, three, and four and that no significant difference existed between these groups. However, the Staff group had a significant within-group difference ($p = 0.04$). This conclusion can also be inferred by conducting Independent Samples T-Tests.

As displayed in Table 6, the p-value in the Equal Variances Assumed row was lower than .05, indicating a significant within-group difference in favor of staff. As a result, the attitudes of various constituencies (administration, faculty, staff, and students) toward the participation of students with ID in college academics were positive. Additionally, a statistically significant

attitude difference was present between Staff members and Non-Staff members, with staff members having a more positive attitude on this measure.

Table 6
The Result of Independent Samples T-Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	T	df	Sig. (2-tailed)
Equal variances assumed	2.75	0.09	-3.69	1102	0.00
Equal variances not assumed			-4.01	266.74	0.00

The second research question examined the attitudes of various constituencies (administration, faculty, staff, and students) toward the participation of students with ID in social activities on a college campus. To answer this question, Table 7 shows the descriptive statistics and Frequency count of participants who completed the Academic sub-dimension of the Scale. The mean score of the Staff group was greater than the other groups (3.40 of 5) and the lowest mean scores belonged to the groups of Non-Staff members and Students (3.23 of 5). Because the mean scores derived from this sub-dimension were very close to each other, a series of analyses were performed to determine if the differences were significant.

Table 7
The Descriptive Statistics and Frequencies of Each Group

Role	Mean	Std. Error	N
Not Student	3.37	.09	297
Student	3.23	.11	804
Not Faculty	3.28	.09	943
Faculty	3.34	.11	158
Not Staff	3.23	.07	925
Staff	3.40	.13	176
Not Administration	3.28	.05	1084
Administration	3.34	.14	17

Univariate Analyses were again conducted in SPSS 22.0 to determine whether between-group differences were significant. Participant roles were independent variables and the Social mean was the dependent variable. Column *p* of Table 8 shows that all values for the Academic

role variable were greater than 0.05. Also, *p*- values were not calculated among the groups of two, three, and four. Therefore, the inferred comment that was made by evaluating the mean scores in Table 8 was confirmed. The mean scores were very close to each other. Nonetheless, the data were checked to determine if a statistical difference existed for additional confirmation, and the p-values in the Tests of Between-Subjects Effects table proved that no significant difference existed between groups on attitudes toward social participation of individuals with ID.

Table 8

Tests of Between Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	*p*
Corrected Model	10.16	10	1.01	5.36	0.00
Intercept	265.49	1	265.49	1.40	0.00
Student	0.11	1	0.11	0.60	0.43
Faculty	0.08	1	0.08	0.43	0.50
Staff	0.20	1	0.20	1.09	0.29
Administration	0.03	1	0.03	0.17	0.67
Student * Faculty	0.00	0	.	.	.
Student * Staff	0.00	0	.	.	.
Student * Administration	0.00	0	.	.	.
Faculty * Staff	0.00	0	.	.	.
Faculty * Administration	0.00	0	.	.	.
Staff * Administration	0.00	0	.	.	.
Student * Faculty * Staff	0.00	0	.	.	.
Student * Faculty * Administration	0.00	0	.	.	.
Student * Staff * Administration	000	0	.	.	.
Faculty * Staff * Administration	0.00	0	.	.	.
Student * Faculty * Staff * Administration	0.00	0	.	.	.
Error	206.61	1090	0.19		
Total	11644.50	1101			
Corrected Total	216.78	1100			

The third research question asked whether there were differences in attitudes toward the college academic and social participation of individuals with ID based on participants' academic discipline, gender, or role (administration, faculty, staff, or student) within the academic community? Three separate analyses were required to answer this research question. Academic discipline, gender, and role were assigned as the independent variable in each analysis, and the Scale General Mean was assigned as the dependent variable. A one-way ANOVA was performed to find the differences in attitudes toward the college academic and social participation of individuals with ID based on participants' academic discipline.

Table 9
Descriptives

	N	Mean	Std. Deviation	Std. Error
College of Arts and Sciences	343	4.10	0.70	0.03
College of Business	176	3.90	0.91	0.06
College of Education	160	4.40	0.58	0.04
College of Engineering	68	3.87	0.72	0.08
College of Health and Human Services	195	4.28	0.61	0.04
Honors College	15	3.97	0.68	0.17
Other administration	140	4.29	0.60	0.05
Total	**1097**	**4.15**	**0.72**	**0.02**

Table 9 shows that most participants were from the College of Arts and Sciences (N = 343). The lowest participation was from the Honors College (N = 15). The highest mean score belonged to the College of Education (4.40 of 5), and the lowest was from the College of Engineering (3.87). Whether such differences are statistically significant can be determined from the data in Table 10. As displayed in Table 10, the Between Groups p-value is lower than 0.05 (p = 0.00). Therefore, a statistically significant difference was present between the groups. To understand which groups differed significantly, Table 11 displays the results of a Post Hoc Multiple Comparison.

Table 10
ANOVA

	Sum of Squares	df	Mean Square	F	p
Between Groups	33.46	6	5.57	11.33	0.00
Within Groups	536.28	1090	0.49		
Total	569.74	1096			

Based on the values in the *p* column of Table 11, the inference can be made that there is a significant difference between *attitudes toward the college academic and social participation of individuals with ID* by *academic discipline*. Specifically, ;

1. There is a significant difference between the College of Arts and Sciences variable and the College of Business variable, with the College of Arts and Sciences having more favorable attitudes toward college academic and social participation of individuals with ID. (*p* = 0.03)
2. There is a significant difference between the College of Arts and Sciences variable and the College of Education variable, with the College of Education having more favorable attitudes toward college academic and social participation of individuals with ID (*p* = 0.00).
3. There is a significant difference between the College of Business variable and the College of Education variable, with the College of Education having more favorable attitudes toward college academic and social participation of individuals with ID (*p* = 0.00).
4. There is a significant difference between the College of Business variable and the College of Health and Human Services variable, with the College of Health and Human Services having more favorable attitudes toward college academic and social participation of individuals with ID (*p*= 0.00).
5. There is a significant difference between the College of Business variable and the Other administration variable, with Other administration having more favorable attitudes toward college academic and social participation of individuals with ID (*p* = .00).
6. There is a significant difference between the College of Education variable and the College of Engineering variable, with the College of Education having more favorable attitudes toward college academic and social participation of individuals with ID (*p* = 0.00).
7. There is a significant difference between the College of Business variable and the College of Engineering variable, with the College of Engineering having more favorable attitudes toward college academic and social participation of individuals with ID (*p* = 0.00).
8. There is a significant difference between the College of Engineering variable and the Other administration variable, with Other administration having more favorable attitudes toward college academic and social participation of individuals with ID (*p* = 0.00).

Table 11

Post Hoc Multiple Comparisons

(I) With which college are you affiliated	(J) With which college are you affiliated	Mean Difference (I-J)	Std. Error	*p*
College of Arts and Sciences	College of Business	0.20	0.06	0.03
	College of Education	-0.30	0.06	0.00
	College of Engineering	0.22	0.09	0.17

	College of Health and Human Services	-0.17	0.06	0.07
	Honors College	0.13	0.18	0.99
	Other administration	-0.18	0.07	0.11
College of Business	College of Arts and Sciences	-0.20	0.06	0.03
	College of Education	-0.50	0.07	0.00
	College of Engineering	0.02	0.10	1.00

(I) With which college are you affiliated	(J) With which college are you affiliated	Mean Difference (I-J)	Std. Error	*p*
College of Business	College of Health and Human Services	-0.37	0.07	0.00
	Honors College	-0.06	0.18	1.00
	Other administration	-0.38	0.07	0.00
College of Education	College of Arts and Sciences	0.30	0.06	0.00
	College of Business	0.50	0.07	0.00
	College of Engineering	0.52	0.10	0.00
	College of Health and Human Services	0.12	0.07	0.64
	Honors College	0.43	0.18	0.25
	Other administration	0.11	0.08	0.80
College of Engineering	College of Arts and Sciences	-0.22	0.09	0.17
	College of Business	-0.02	0.10	1.00
	College of Education	-0.52	0.10	0.00
	College of Health and Human Services	-0.40	0.09	0.00
	Honors College	-0.09	0.20	0.99
	Other administration	-0.41	0.10	0.00

Table 11 (continued)

(I) With which college are you affiliated	(J) With which college are you affiliated	Mean Difference (I-J)	Std. Error	*p*
College of Health and Human Services	College of Arts and Sciences	0.17	0.06	0.07
	College of Business	0.37	0.07	0.00
	College of Education	-.0.12	0.07	0.64
	College of Engineering	0.40	0.09	0.00
	Honors College	0.30	0.18	0.65
	Other administration	-0.01	0.07	1.00
Honors College	College of Arts and Sciences	-0.13	0.18	0.99
	College of Business	0.06	0.18	1.00
	College of Education	-0.43	0.18	0.25
	College of Engineering	0.09	0.20	0.99
	College of Health and Human Services	-0.30	0.18	0.65
	Other administration	-0.31	0.19	0.63
Other administration	College of Arts and Sciences	0.18	0.07	0.11
	College of Business	0.38	0.07	0.00
	College of Education	-0.11	0.08	0.80
	College of Engineering	0.41	0.10	0.00
	College of Health and Human Services	0.01	0.07	1.00
	Honors College	0.31	0.19	0.63

Another One Way ANOVA test was performed to determine differences in attitudes toward the college academic and social participation of individuals with ID based on participants' gender. Table 12 shows that the majority of the participants were Female (N = 776). The lowest participation was from the groups of Transgender and Other (N = 8). The highest mean score belonged to Transgender (4.47 of 5) variable, and the lowest mean score belonged to Other (3.63) variable.

Table 12

Descriptive Statistics

	N	Mean	Std. Deviation	Std. Error
Male	307	3.94	0.80	0.04
Female	776	4.24	0.65	0.02
Transgender	8	4.47	0.73	0.26
Other	8	3.63	1.14	0.40
Total	1099	4.15	0.71	0.02

Whether these differences in Means were statistically significant can be inferred from the data in Table 13). As displayed, the p-value between Groups is lower than 0.05 (p = 0.00). Therefore, a statistically significant difference is present between the groups.

Table 13

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	23.67	3	7.89	15.90	0.00
Within Groups	543.30	1095	.49		
Total	566.98	1098			

Examination of the values in the p column of Table 14 allows determination of which groups have statistically significant differences between the general scores obtained from the Scale. Accordingly, only Male and Female variables have a significant difference *in attitudes toward the college academic and social participation of individuals with ID* with females having more positive attitudes toward the college academic and social participation of individuals with ID. Although the mean score of transgender individuals was higher, there was not a significant difference due to the low number of participants in the transgender group. To carry out the ANOVA test, at least 20 data points must be present in the subgroups of variables (Çokluk et al., 2012). Given the utilization of parametric tests in this research, there is no objection to performing the ANOVA test.

A univariate analysis was performed to find differences in attitudes toward the college academic and social participation of individuals with ID based on participants' academic role. Table 15 shows that the Staff group had the highest mean score among the General Scale scores, while the group with the lowest mean score was Not staff. *Attitudes toward the college academic and social participation of individuals with ID based on participants' academic role* scores were highly positive in all groups. As shown by the data in Table 15, the mean scores were very close to each other. Whether the scores groups obtained from the General Scale are significantly different can be understood by looking at the Tests of Between-Subjects Effects table.

Table 14

Post Hoc Multiple Comparisons

(I) How do you identify your gender? -	(J) How do you identify your gender? -	Mean Difference (I-J)	Std. Error	*p*
Male	Female	-0.30	0.04	0.00
	Transgender	-0.53	0.25	0.14
	Other (please identify)	0.30	0.25	0.63
Female	Male	0.30	0.04	0.00
	Transgender	-.0.23	0.25	0.79
	Other (please identify)	0.60	0.25	0.07
Transgender	Male	0.53	0.25	0.14
	Female	0.23	0.25	0.79
	Other (please identify)	0.84	0.35	0.08
Other	Male	-0.30	0.25	0.63
	Female	-0.60	0.25	0.07
	Transgender	-0.84	0.35	0.08

Table 15

Descriptive Statistics

Role	Mean	Std. Error	N
Not Student	4.23	0.15	297
Student	4.32	0.18	804
Not Faculty	4.32	0.15	943
Faculty	4.21	0.19	158
Not Staff	4.12	0.12	925
Staff	4.45	0.22	176
Not Administration	4.16	0.08	1084
Administration	4.40	0.24	17

Table 16 displays the values for the Academic role variable in column *p*, which are greater than 0.05. Also, p- values are not calculated among the groups of two, three, and four. Therefore, the inferred comment made by evaluating the mean scores in Table 15 was confirmed. The mean scores were very close to each other; however, because the p-values are

greater than 0.05 in the Tests of Between-Subjects Effects table, no statistically significant difference was found between the *attitudes toward the college academic and social participation of individuals with ID based on participants' academic role*.

Table 16
Tests of Between-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	*P*
Corrected Model	6.36	10	0.63	1.22	0.27
Intercept	447.66	1	447.66	862.11	0.00
Student	0.32	1	0.32	0.63	0.42
Faculty	0.00	1	0.00	0.00	0.97
Staff	0.94	1	0.94	1.81	0.17
Administration	0.50	1	0.50	0.96	0.32
Student * Faculty	0.00	0	.	.	.
Student * Staff	0.00	0	.	.	.
Student * Administration	0.00	0	.	.	.
Faculty * Staff	0.00	0	.	.	.
Faculty * Administration	0.00	0	.	.	.
Staff * Administration	0.00	0	.	.	.
Student * Faculty * Staff	0.00	0	.	.	.
Student * Faculty * Administration	0.00	0	.	.	.
Student * Staff * Administration	0.00	0	.	.	.
Faculty * Staff * Administration	0.00	0	.	.	.
Student * Faculty * Staff * Administration	0.00	0	.	.	.
Error	567.55	1093	0.51		
Total	19634.79	1104			
Corrected Total	573.91	1103			

DISCUSSION AND CONCLUSION

The Education for All Handicapped Children Act (P.L. 94-142), passed in 1974 and signed into law in 1975, required public schools receiving federal funds to provide children with disabilities with equal access to education. It also required that these children's education be provided in the Least Restrictive Environment (LRE) to provide maximum opportunity for interaction with children without disabilities. Still, students with intellectual disabilities were excluded from attending college with their peers until relatively recently. This inconsistency is concerning, especially because many positive outcomes are associated with college attendance by individuals with ID. The benefits to students with ID include higher rates of employment (Butler et al., 2016; Zafft et al., 2004), more friendships (Butler et al., 2016), and increased confidence and better self-advocacy skills (Hart et al., 2010). Further, society benefits because college attendance by individuals with ID results in reduced dependence on tax-funded government services (Chambless et al., 2010; Hall et al., 2013; Parisi & Landau 2019; Sannicandro, 2016). To maximize these benefits, factors that enhance the successful participation of students with ID in college activities deserve more study. These factors include feelings of being accepted (Choi et al., 2013) and how inclusion is supported and conceptualized at an institution (Bumble et al., 2019).

The present study was conducted at a medium-sized comprehensive regional university in the Southeastern United States. Its purposes, stated in the research questions, were: 1) to assess the attitudes of campus constituencies (administration, faculty, staff, and students) regarding the participation of students with ID in college academics; 2) to assess the attitudes of these constituencies regarding the participation of students with ID in social activities on campus; and 3) to assess differences in attitudes toward the college academic and social participation of individuals with ID based on participants' academic discipline, gender, or role (administration, faculty, staff, or student) within the academic community.

In answer to research question one, the results indicate that all constituencies on the campus under study had positive attitudes toward the participation of students with ID in college academics. Staff members held significantly more positive attitudes toward the academic participation of these students than were held by the rest of campus; still, a mean rating of 3.71 on a scale of 1 – 5, with 5 indicating complete agreement that students with ID should participate in college academics, was found for members of the campus community who did not identify as "staff.' No significant differences in attitude were found between any other constituencies.

In answer to research question two, campus attitudes toward the social participation of students with ID on campus were moderately positive, though not as positive as attitudes toward academic inclusion. The mean rating, again on a scale of 1 – 5, was 3.22, and both the range of the scores and the standard deviation were narrower for this question, which means there was less variation in campus attitudes toward social participation than there was toward

academic participation. Further, there were no significant differences between constituencies in their attitudes toward the social participation of students with ID.

It is noteworthy that attitudes toward the social participation of individuals with ID were both lower and less variable than attitudes toward their academic participation. While academic coursework frequently contains group projects and other opportunities for students to interact, many courses on college campuses also tend to rely heavily on lecture formats in which interaction is limited. As such, it is possible that attitudes toward academic participation were higher due to a perception that less interaction will be required. However, research on attitudes of both students and faculty report positive perceptions after experiencing the inclusion of students with ID in classes (O'Connor et al., 2012; Westling et al. (2013). One of this study's potential contributions is that it provides a measure of baseline data, and future studies can assess how having students with ID on campus impacts attitudes.

Likewise, theories such as Intergroup Contact Theory (Allport, 1954) and studies of the social perceptions of college students (Phillips et al., 2019) indicated the perception that increased familiarity with individuals with ID in social settings should result in increased perceptions of their competence and comfort in interacting with them. It is unclear why attitudes toward the social participation of students with ID were viewed less favorably than their academic participation was. Still, starting in the fall 2021 semester, students with ID will be enrolled in classes and welcome at all other social activities on the campus on which this study was conducted. As was mentioned regarding attitudes toward academic participation, we recommend that future studies examine whether increased interaction and familiarity with students with ID would impact campus attitudes toward their social inclusion.

Regarding the third research question, significant differences were found in attitudes toward the academic and social participation of students with ID based on academic discipline. Participants from the College of Education had the most positive attitudes toward the social and academic participation of students with intellectual disabilities. Participants from the College of Business had the least positive responses to this question, with each the College of Arts and Sciences, College of Health and Human Services, College of Engineering, and Other Administration reporting significantly more positive attitudes than the participants from the College of Business. No significant differences were found between the Colleges of Arts and Sciences, Health and Human Services, Engineering, and Other Administration other than that the attitudes of Other Administration were significantly more positive than those of the College of Engineering. Significant differences based upon the gender of participants were also found, with females having more positive attitudes toward the academic and social participation of students with ID than male students. Attitudes toward the college academic and social participation of individuals with ID based were highly positive regardless of academic role and no signficant differences were found between attitudes based on their academic role.

The difference in attitudes toward the academic and social inclusion of students with ID based on academic discipline also provides an opportunity for further research. Studies that

examine the attributes or experiences that cause those in the College of Education to hold the most favorable attitudes and those in the College of Business to hold the least favorable attitudes toward inclusion would be valuable. Such studies may find that groups with relatively less favorable attitudes had less previous exposure to individuals with ID prior to their introduction to campus. If increased exposure as a result of this university's inclusive programming results in more positive attitudes among these groups, this could confirm studies that found that greater knowledge about ID and more frequent contact with individuals with ID resulted in a reduction of discomfort, less feeling of pity, and higher levels of interaction with people with ID (Phillips et al., 2019). If, on the other hand, individuals with ID are perceived less positively in some environments because they perform less competently in those situations, it would be helpful to determine how to support better performance to increase acceptance. Likewise, it would be interesting if future studies explored why females report more positive attitudes toward the inclusion of this population than males.

This study limitations include the time available for the respondents to complete the survey, particularly considering that the instrument was administered in the beginning of the COVID-19 pandemic and transition from face-to-face to online learning. Notably, the unprecedented times of the global pandemic must have had an impact in the respondents' ability to respond to the survey and focus on the matter of inclusion of students with ID in campus academic and social activities. Moreover, we cannot generalize the results as the respondents may not be representative of other higher education institutions across the United States.

Finally, numerous benefits have been reported concerning campus involvement in planning inclusive post-secondary programs for students with ID (Corby et al., 2020; Judge & Izuzquiza Gasset, 2015; McKay et al., 2015; Moore & Schelling, 2015; Wilt & Morningstar, 2020). While students with ID are likely to need some specialized supports, they should typically use the same supports as are used by other students. As a result, training must be available to all campus citizens to ensure they feel competent and comfortable interacting with students with ID. Certainly, when higher education institutions are committed to diversity and inclusion efforts, supporting the participation of individuals with ID on campus academic and social activities, students with ID experience strengthened autonomy, increased agency, sense of belonging, and representation which have significant impacts on their learning experiences (Leake & Stodden, 2014). Therefore, it is important to involve a broad range of stakeholders from the earliest stages of planning. Involving individuals performing different functions and representing different offices will ensure that services and supports are in place, that needed modifications to environments and processes are made, and that employees possess the skills and attitudes to provide a successful experience for students with ID. Moreover, a campus-wide involvement in actions that benefit students with ID "serve as [inclusive] models for the wider society" and to the campus community at-large (Leake & Stodden, 2014, p. 406). Finally, special care should be taken to ensure that those anticipated to have less frequent interactions with

students with ID also have input and receive training so that all corners of campus provide a welcoming environment. This broad approach to planning enhances the likelihood that everyone can see beyond their differences and focus on providing the best possible education to all students.

Funding information

This material was produced in part under Grant No. 14107033-070120-3-18 provided by the Florida Center for Students with Unique Abilities at the University of Central Florida, with funding made available by The Florida Postsecondary Comprehensive Transition Program Act (Fla. Statutes 1004.6495). The views expressed herein do not necessarily represent the positions or polices of UCF or the State of Florida. No official endorsement by the Florida Board of Governors of the State University System or by the Florida Department of Education of any product, commodity, service or enterprise mentioned in this publication is intended or should be inferred. This product is public domain. Authorization to reproduce it in whole or in part is granted.

REFERENCES

Alnahdi, G. H. (2019): The interaction between knowledge and quality of contact to predict Saudi university students' attitudes toward people with intellectual disability, *International Journal of Developmental Disabilities, 0*(0), 1–7. https://doi.org/10.1080/20473869.2019.1638582

Allport, G. W. (1954). *The nature of prejudice*. Addison-Wesley.

Baker, J. N., Lowrey, K. A., & Wennerlind, K. R. (2018). Building an inclusive post-secondary education program for young adults with intellectual developmental disability. *Physical Disabilities: Education and Related Sciences*, *37*(2), 13–33. https://files.eric.ed.gov/fulltext/EJ1202971.pdf

Butler, L. N., Sheppard-Jones, K., Whaley, B., Harrison, B., & Osness, M. (2016). Does participation in higher education make a difference in life outcomes for sudents with intellectual disability? *Journal of Vocational Rehabilitation, 44*, 295–298. https://doi.org/10.3233/JVR-160804

Bumble, J. L., Carter, E. W., Bethune, L. K., Day, T., & McMillan, E. D. (2019). Community conversations on inclusive higher education for students with intellectual disability. *Career Development and Transition for Exceptional Individuals, 42*(1), 29–42. https://doi.org/10.1177/2165143418781303

Chambless, C., Nelson, R. E., & McCormick, S. (2010). *Impact of the Medicaid Work Incentive (MWI) program on earnings, health care expenditures, and utilization of public assistance for individuals with disabilities*. University of Utah Center for Public Policy and Administration. www.advancingstates.org/ node/52917

Choi, H.S., Johnson, B., & Kriewitz, K. (2013). Benefits of inclusion and segregation of individuals with disabilities in leisure. *International Journal on Disablity and Human Development, 12,* 15–23. https://doi.org/10.1515/ijdhd-2012-0120

Çokluk, U., Şekercoğlu, G., & Büyüköztürk, Ş. (2012). *Sosyal bilimler için çok değişkenli istatistik* [*Multivariate statistics for social sciences*]. Pegem Akademy Press.

Corby, D., Taggart, L., & Cousins, W. (2020). The lived experience of people with intellectual disabilities in postsecondary or higher education. *Journal of Intellectual Disabilities*, *24*(3), 339–357. https://doi.org/10.1177/1744629518805603

Eisenman, L., & Mancini, K. (2010). College perspectives and issues. In M. Grigal & D. Hart (Eds.), *Think college: Post-secondary education options for students with intellectual disabilities* (pp. 161–187). Paul H. Brookes.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in education*. McGraw-Hill.

Fowler, F. J., Jr. (2014). Survey research methods (5th ed.) SAGE Publishing.

Goodman, N. (2015). *The impact of employment on the health status and health care costs of working-age people with disabilities*. National Center on Leadership for the Employment and Economic Advancement of People with Disabilities (LEAD). http://www.leadcenter.org/system/files/resource/downloadable_version/impact_of_employment_health_status_health_care_costs_0.pdf

Haffner, D., Moffatt, C., & Kisa, N. (2011). Cutting-edge: Integrating studentts with intellectual and developmental disabilities into a 4-year liberal arts college. *Career Development for Exceptional Individuals, 34,* 18–30.

Hall, J. P., Kurth, N. K, & Hunt, S. L. (2013). Employment as a health determinant for working-age, dually-eligible people with disabilities. *Disability and Health Journal*, *6*, 100–106. https://doi.org/10.1016/j.dhjo.2012.11.001

Hart, D., Grigal, M., & Weir, C. (2010). Expanding the paradigm: Post-secondary education options for individuals with autism spectrum disorder and intellectual disability. *Focus on Autism and Other Developmental Disabilities, 25,* 134–150. https://doi.org/10.1177/1088357610373759

Judge, S., & Izuzquiza Gasset, D. (2015). Inclusion in the workforce for students with intellectual disabilities: A case study of a Spanish postsecondary education program. *Journal of Postsecondary Education and Disability*, *28*(1), 121–127. https://eric.ed.gov/?id=EJ1066318

Keith, J. M., Bennetto, L., & Rogge, R. D. (2015). The relationship between contact and attitudes: Reducing prejudice toward individuals with intellectual and developmental disabilities. *Research in Developmental Disabilities, 47*, 14–26. https://doi.org/10.1016/j.ridd.2015.07.032

Keith K., & Bonham, G. (2005) The use of quality of life data at the organization and systems level. *Journal of Intellectual Disability Research 49*, 799–805. https://doi.org/10.1111/j.1365-2788.2005.00755.x

Kritsotakis, G., Galanis, P., Papastefanakis, E., Meidani, F., Philalithis, A. E., Kalokairinou, A., & Sourtzi, P. (2017). Attitudes towards people with physical or intellectual disabilities among nursing, social work and medical students. *Journal of Clinical Nursing, 26*(23–24), 4951–4963.

Leake, D. W., & Stodden, R. A. (2014). Higher education and disability: Past and future of underrepresented populations. *Journal of Postsecondary Education and Disability*, *27*(4), 399–408. https://files.eric.ed.gov/fulltext/EJ1059990.pdf

May, C. (2012). An investigation of attitude change in inclusive college classes including young adults with an intellectual disability. *Journal of Policy and Practice in Intellectual Disabilities, 9*(4), 240–246. https://doi.org/10.1111/jppi.12013

McAllister, R. J., Carr, K., Sutherland, C. A., Azar, N., & Horton, S. (2018). Brief report: Bystander perceptions of an exercise program for adults with autism and an intellectual disability within a university settting. *Journal on Developmental Disabilities, 23*(2), 50–54.

McKay, D., Banner, R., Sherif, V., & Rhodes, A. (2015). Learning, independence, and relationships: The impact of supported higher education on students with intellectual disabilities. *Research Brief*. https://eric.ed.gov/?id=ED574739

McManus, J. L., Feyes, K. J., & Saucier, D. A. (2011). Contact and knowledge as predictors of attitudes toward individuals with intellectual disabilities. *Journal of Social and Personal Relationships, 28*(5), 579–590. https://doi.org/10.1177/0265407510385494

Moore, E. J., & Schelling, A. (2015). Postsecondary inclusion for individuals with an intellectual disability and its effects on employment. *Journal of Intellectual Disabilities*, *19*(2), 130-148. https://doi.org/10.1177/174462951456448

Murch, A. J., Choudhury, T., Wilson, M., Collerton, E., Patel, M. & Scior, K. (2017). Explicit and implicit attitudes towards people with intellectual disabilities: The role of contact and participant demographics. *Journal of Applied Research in Intellectual Disabilities*, *31*(5), 778-784. https://doi.org/10.1111/jar.12429

O'Connor, B., Kubiak, J., Espiner, D., & O'Brien, P. (2012). Lecturer responses to the inclusion of students with intellectual disabilities auditing undergraduate classes. *Journal of Policy and Practice in Intellectual Disabilities, 9*(4), 247–256.

Ogurlu, U., & Sevim, M. N. (2017). The opinions of gifted students about leadership training. *Journal of Ethnic and Cultural Studies*, *4*(2), 41–52. https://doi.org/10.29333/ejecs/73

Papay, C., Grigal, M., Hart, D., Kwan, N., & Smith, F. A. (2018). Predictors of inclusive course enrollments in higher education by students with intellectual and developmental disabilities. *Intellectual and Developmental Disabilities, 56*(6), 458–470. https://doi.org/10.1352/1934-9556-56.6.458

Parisi, P., & Landau, J. (2019). Positive outcomes for students with intellectual disability attending college: Why Medicaid Waivers should provide support. *Insight: A Think College Brief on Policy, Research, & Practice, 43*. University of Massachusetts Boston, Institute for Community Inclusion.

Phillips, B. A., Fortney, S. & Swafford, L. (2019). College students' social perceptions toward individuasl with intellectual disability. *Journal of Disability Policy Studies, 30*(1), 3–10.

Rao, S. (2004). Faculty attitudes and students with disabilities in higher education: A literature review. *College Student Journal, 38*, 191–198*.*

Rea, L. M., & Parker, R. A. (2014). *Designing and conducting survey research: A comprehensive guide* (4th ed.) Jossey-Bass.

Sannicandro, T. (2016). *Effect of post-secondary education on employment and income for individuals with intellectual disabilities* (doctoral dissertation). https://search.proquest.com/docview/1808241726

Santos, S. (2014) Adaptive behaviour on the Portuguese curricula: a comparison between children and adolescents with and without intellectual disability. *Creative Education, 5,* 501–509. https://doi.org/10.4236/ce.2014.57059

Sheppard-Jones, K., Kleinert, H. L., Druckmiller, W., & Ray, M. K. (2015). Students with intellectual disability in higher education: Adult service provider prospective. *Intellectual and Development Disabilities*, *53*(2), 120–128. https://doi.org/10.1352/1934-9556-53.2.120

Showers, A. H., & Kinsman, J. W. (2017). Factors that contribute to college success for students with learning disabilities. *Learning Disability Quarterly, 40*(2), 81–90. https://doi.org/10.1177/0731948717690115

Simoes, C., & Santos, S. (2016). Comparing the quality of life of adults with and without intellectual disability. *Journal of Intellectual Disability Research*, *60*, 378–388. https://doi.org/10.1111/jir.12256

Think College National Coordinating Center. (2017). *Higher education access for students with intellectual disability in the United States*. Institute for Community Inclusion.

U.S. Department of Education. (2016). *Annual report to Congress on implementation of the Individuals with Disabilities Education Act, 2016*. https://www2.ed.gov/about/reports/annual/osep/2016/index.html

Westling, D. L., Kelley, K. R., Cain, B., & Prohn, S. (2013). College students' attitudes about an inclusive post-secondary education program for individuals with intellectual disability. *Education and Training in Autism and Developmental Disabilities, 48*(3), 306–319.

White, D., Hillier, A., Frye, A., & Makrez, E. (2019). College students' knowledge and attitudes towards students on the autism spectrum. *Journal of Autism and Developmental Disorders, 49*(7), 2699–2705. https://doi.org/10.1007/s10803-016-2818-1

Wilt, C. L., & Morningstar, M. E. (2020). Peer supports: Focusing on the experiences of college students with intellectual disability. *Think College Fast Facts*, *27*.

https://thinkcollege.net/sites/default/files/files/resources/FF_27_Peer_Supports_Wilt%26Morningstar.pdf

Zafft, C. Hart, D., & Zimbrich, K. (2004). College careeer connection: A study of youth with intellectual disability and the impoact of post-secondary education. *Education and Training in Developmental Disabilities, 39,* 45–53.

Appendix A

Statements

Number	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	People with severe disabilities have the same educational opportunities as people without disabilities.					
b.	People with severe disabilities have the same employment opportunities as people without disabilities.					
c.	People with severe disabilities should have more opportunities for post-secondary education.					
d.	I would like to see people with severe disabilities engaging in social activities on the FGCU campus.					
e.	I do not think that people with severe disabilities can benefit from higher education					
f.	I would prefer not to work in settings that employ individuals with severe disabilities.					
g.	I would like to take a class with students with intellectual disabilities.					
h.	Students with disabilities have the ability to learn in a college class.					
i.	People with severe disabilities should have the opportunity to take courses and earn employment certifications at FGCU.					
j.	I would like to have a roommate with an intellectual disability.					
k.	People with severe disabilities do not want to interact with non-disabled individuals.					
l.	People with intellectual disabilities will be happiest if they live in group homes.					

m.	I would like to see people with severe disabilities living in residence halls at FGCU.					
n.	I am not comfortable in the presence of people with severe disabilities.					
o.	Separate housing and education are the most effective ways to meet the needs of people with severe disabilities.					
p.	My own education/work would suffer if people with severe disabilities were members of the FGCU community.					
q.	I enjoy participating in leisure activities with people with intellectual disabilities.					
r.	I often strike up conversations with strangers who have intellectual disabilities.					
s.	Many jobs on campus could be performed by individuals with intellectual disabilities.					