Abstract

A central purpose of higher education is to prepare students to be active participants in our democracy. To measure how students intend to participate, we need items to capture their anticipated behavior and analytical tools to summarize the results in meaningful ways. This study used a popular set of items along with latent class analysis (LCA) to identify four political participation profiles which differed both in the extent and nature of their anticipated participation. Differences among profiles in gender, ideology, and political knowledge were examined to acquire validity evidence, which was generally supportive. In addition to describing the profiles and how they can be used to assess interventions and understand college students, we offer improvements and suggestions for the measurement of civic and political participation in young adults.

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Political Participation Profiles in a College Student Population

*H*igher education was called to strengthen its emphasis on students' civic learning and democratic participation through *A Crucible Moment: College Learning and Democracy's Future* (The National Task Force on Civic Learning and Democratic Engagement, 2012). As the ultimate goal of this initiative is to increase political learning and democratic engagement, assessment is needed to see if and how college students are rising to the challenge. A promising assessment tool is a collection of political participation items created by Keeter et al. (2002) and adapted by Beaumont et al. (2006). Clarity is still needed, however, on how best to summarize these items.

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To clarify the challenges, consider an example where two students are asked to indicate whether they plan to do each of the following activities: vote, contact government officials, protest, or boycott a product. Responses are either yes (1) or no (0) to each item. Student A responds 1, 1, 0, 0 and Student B responds 0, 0, 1, 1 to the four items, respectively. If a simple sum score were created, the two students would be indistinguishable in their anticipated future participation, despite the fact they plan to engage in different types of behavior. If the intention is to measure the *number* of activities students intend to engage in, but not the *type*, summing responses across items is adequate. However, even when the goal is simply to obtain the number of activities, the results of previous research (summarized later in the paper) provide weak support for creating subscale scores (e.g., Beaumont et al., 2006).

The current study explores an alternative method for summarizing the information obtained from the political participation items. We employ latent class analysis (LCA) to classify college students into groups (referred to hereafter as classes) based on the type of political actions they intend to take in the future. We identify how many classes exist, the percentage of students in each class, and describe the political actions college students in each class anticipate taking in the future. Understanding what kinds of classes exist is useful for many reasons. First, the results can inform the development of initiatives to promote political participation. For instance, if a large group of students emerges that anticipates participating in few activities, a campus might place more emphasis on informing students about the many ways they can participate and helping them see the value in doing so. Second, the results are useful for assessment purposes. If students interact with the measure multiple times (perhaps before and after interventions), changes in class membership can indicate changes in the nature of students' anticipated future political actions. Third, understanding how students participate has implications for democracy. For example, voting in an election, participating in a march, and contacting an official differ greatly in the specificity of information being communicated and the pressure it applies to the decision-making process.

In the sections below, we first provide a brief overview of how political participation has been defined followed by approaches to measuring political participation. We outline in further detail the challenges to summarizing political participation items and the potential of LCA to offer meaningful information before providing the methods and results for our LCA.

Measuring Political Participation

According to Brady (1999), political participation entails "action by ordinary citizens directed toward influencing some political outcomes" (p. 737). A popular index for measuring political participation was created by Keeter et al. (2002) and consists of 19 items which are grouped into three overarching areas: civic indicators, electoral indicators, and indicators of political voice. Keeter et al.'s index was adapted by Beaumont et al. (2006) and included in the "anticipated future engagement" section of their Political Engagement Project Survey (PEPS), a survey used for the assessment of political engagement programs in higher education[1]. A subset of the items used by Beaumont et al. (2006) is shown in Table 1. Although popular, clarity is still needed on how best to summarize these items because different researchers employ different methods.

Summarizing Political Participation

Once responses to the items in Table 1 are collected, researchers have several options for analysis. A popular technique is the use of subscales, which can be calculated either by averaging or summing the items aligned with each subscale. For example, Beaumont et al. (2006) summarized participation items with two different subscales, one consisting of electoral activities like voting, working with a political group or campaign, and displaying campaign paraphernalia, and another consisting of activities like boycotting products, participating in protests, supporting petitions, contacting governmental officials, and contacting the media. Unfortunately, the confirmatory factor analytic results provided by Beaumont et al. (2006) support combining the items to create one of the subscale scores but not the other.

Another method for summarizing the items was used by Keeter et al. (2002). These researchers created a sum score for items classified as electoral indicators (e.g., voting) and another sum score for items classified as civic indicators (e.g., volunteering). The two sum scores were then used to categorize respondents into one of four groups: 1) *disengaged* (little to no involvement in civic or electoral activities); 2) *civic specialists* (participation in civic activities, little to no involvement in electoral activities); 3) *electoral specialists* (participation in electoral

We employ latent class analysis (LCA) to classify college students into groups (referred to hereafter as classes) based on the type of political actions they intend to take in the future.

[1] Beaumont et al. adapted the items by asking respondents to indicate how certain they are to take the action in the future, with responses collected on a scale ranging from 1 (*will certainly* <u>*not*</u> *do this*) to 6 (*will certainly do this*). This differs from Keeter et al. who asked whether the respondent had engaged in the behavior. Other differences between the items were minor or due to differences in mode of administration (e.g., phone vs. paper and pencil).

Table 1

Anticipated Future Engagement Items on the PEPS and Percentage of Students Endorsing Each Item

Item

Item	Item	Label for Figures/Tables	%
1	Vote in every national election	vote: national election	87%
2	Vote in every local election	vote: local election	60%
3	Discuss political problems with friends	discuss political problems	63%
4	Work together with someone or some group to solve a problem in the community where you live	solve community problems	59%
5	Contact or visit a public official - at any level of government - to ask for assistance or to express your opinion	contact public official	22%
6	Contact a newspaper or magazine to express your opinion on an issue	contact newspaper/magazine	14%
7	Call in to a radio or television talk show to express your opinion on a political issue	call radio or tv show	11%
8	Attend a speech, informal seminar, or teach-in about politics	attend political speech/seminar	43%
9	Take part in a protest, march, or demonstration	protest/demonstration	47%
10	Sign a written or e-mail petition about a political or social issue	sign petition for political/social issue	63%
11	Work with a political group or volunteer for a campaign	work with political group/campaign	33%
12	NOT buy something or boycott it because of conditions under which the product is made, or because you dislike the conduct of the company that produces it	boycott products	53%
13	Buy a certain product or service because you like the social or political values of the company that produces or provides it	buycott products	61%
14	Wear a campaign button, put a sticker on your car, or place a sign in your house, apartment, dorm.	promote campaign w/button, sticker, sign	44%
15	Give money to a political candidate or cause	give $ political candidate/cause	25%
16	Work as a canvasser going door to door for a political candidate or cause	canvasser for political candidate/cause	11%

Note. Percentages are based on this study's sample.

activities, little to no involvement in civic activities); and 4) *dual activists* (participation in both civic and electoral activities). Although intriguing, it is unclear from their documentation as to whether any empirical techniques were used to inform or provide validity evidence for the creation of sum scores or respondent groupings.

Whether the items should be averaged or summed together, regardless of whether they are subsequently used to create groups, is debatable. Andolina et al. (2003) discouraged against summing or averaging the Keeter et al. (2002) items, arguing a total score might capture the extent of participation but not the type of participation. Furthering Andolina et al.'s argument against summing the items are the low inter-item correlations and modest reliability indices for the items used in each overarching category (e.g., electoral indicators). This information, combined with the lack of supportive factor analytic evidence, suggests an average or sum score for the items is not appropriate.

Given the lack of conceptual and empirical support for averaging or summing items, a promising alternative method for summarizing political participation items is the use of classification techniques. Such techniques, which include LCA and cluster analysis, have been used to categorize respondents into groups based on their patterns of political participation (e.g., Brunton-Smith & Barrett, 2015). Most relevant to the current study are the results of a cluster analysis which used a nationally representative U.S. sample of young adults ages 18-29 and items inquiring about actual civic and political behavior (Kawashima-Ginsberg, 2011). Six groups, about equal in size, were identified in both the 2008 and 2010 data used in this cluster analysis. At both time points, groups labeled *broadly-engaged* and *political specialists* emerged, with the former characterized by participation in both politics and community service and the latter characterized by participation only in politics. A *civically alienated* group was also found at both time points consisting of young adults who did not participate at all. Groups unique to 2008 included a group that only voted (*only voted*), a group characterized by not voting but moderate rates of community engagement (*engaged non-voters*), and a group that engaged in political discussions and donated to causes but were not registered to vote (*politically marginalized*). Groups unique to 2010 included those characterized by only staying informed and discussing issues (*talkers*), only donating (*donors*), or only registering to vote (*under-mobilized*). These results illustrate the use of classification techniques to summarize civic and political participation and highlight the variability in how young adults choose to be engaged.

Purpose of Study

To date, few studies have used classification techniques to summarize civic and political participation patterns and of those that exist, none have focused solely on college students. Using a popular set of items which were created by Keeter et al. (2002) and adapted by Beaumont et al. (2006), we employ a classification technique known as LCA to classify college students into groups based on the type of political participation they anticipate doing in the future. To determine whether the inferences we are making about the classes made sense given previous research, a validity study was conducted. Specifically, we formulated hypotheses about how class membership should be related to other variables (e.g., gender, political ideology) based on previous research, tested these hypotheses, and treated results in which the hypotheses were supported as indicative of accurate class interpretations.

Methods

Procedure and Participants

The sample consisted of 708 college students at a public, mid-sized institution in the mid-Atlantic who completed the PEPS during required university-wide Assessment Days (Pastor et al., 2019). Data from three administrations were combined to create the sample, with 22%, 52%, and 25% of the students being tested in Fall 2017, Spring 2018, and Spring 2019, respectively. The distribution of gender and race in the sample aligns with the distribution at the university, with 59% of the sample identifying as female and 75% identifying as White. The sample was comprised of first-year (21%), second-year (58%), and third-year students (21%).

Given the lack of conceptual and empirical support for averaging or summing items, a promising alternative method for summarizing political participation items is the use of classification techniques.

Measure

The items in Table 1 were used to measure anticipated participation, which can be thought of as expectations for future engagement in various political activities. Students originally responded to these items using a 6-point Likert scale ranging from 1 (*will certainly not do this*) to 6 (*will certainly do this*). We collapsed the responses into two categories to avoid estimation issues and simplify the interpretations of the results. The two response categories included in our analyses were 1 (labeled hereafter as *will do this*) which included responses 4 through 6, and 0 (labeled hereafter as *will not do this*) which included responses 1 through 3.

Political ideology was measured for the validity study using one question on the PEPS where respondents conveyed on a scale of 1 (*strongly liberal*) to 6 (*strongly conservative*) how they leaned towards most political issues. Responses were split into three categories for the 696 students who responded to the item: liberal (1-2; 28% of sample), middle-of-the-road (3-4; 56% of sample), and conservative (5-6; 16% of sample).

Latent Class Analysis

We conducted a series of LCAs to classify students into groups. We initially fit a one-class model to the data and in subsequent analyses we increased the number of classes by one. We followed this model building procedure until the models were no longer well-identified, which is typically signified by convergence issues or incredibly small classes. We compared models differing in the number of classes using a variety of indices. Technical details regarding the model and analysis can be found in supplemental material available from the first author. The data and syntax used for analyses are openly available in the online data repository CivicLEADS (Pastor et al., 2021).

Validity Study Analyses

We conducted two separate chi-square tests of independence to determine the association between class membership, gender, and political ideology.

Results

Descriptive Statistics

The percentage of students who expected they will engage in each activity in the future is shown in Table 1. The vast majority (87%) anticipated they will vote in every national election. There are other areas where a majority expected to participate, like voting in local elections (60%), discussing political problems (63%), buycotting products (61%) and signing a petition about a political or social issue (63%). Fewer students indicated they will protest/demonstrate (47%), attend a speech about politics (43%), work with a political group or campaign (33%), and display political swag (44%). Very few students (11%) expected to serve as a canvasser for a political candidate/cause or voice their opinion about political issues through newspapers/magazines (14%) or radio/television shows (11%).

Latent Class Analysis

We conducted a series of LCAs to classify students into groups. We initially fit a one-class model to the data and in subsequent analyses we increased the number of classes by one.

LCAs specifying one to six classes were conducted without estimation issues and the statistics used to choose among the models are shown in Table 2. Because most indices favor the 4-class model, this model was championed as the final solution. The estimated conditional probabilities of responding *will do this* for each activity in each class for the 4-class solution are shown in Figure 1 and Table 3. Two activities are absent from Figure 1 and Table 3 because no class was likely to engage in these activities. These activities included calling into a radio or television talk show to voice one's opinion and working as a canvasser for a political candidate or cause.

Class 1 in the 4-class model is characterized by anticipated engagement in almost all activities and consists of 15% of the sample. We describe these students as the *high-*

Table 2

Fit Indices and Entropy for the 1- to 6-Class Models

Number of classes	Number of parameters	*LL*	*BIC*	*SSABIC*	Entropy	*BLRT p*	*BF*[a]	*cmP*
1	16	-6582	4984	4933	1.00	---	---	.00
2	33	-5733	3398	3293	.83	< .001	---	.00
3	50	-5513	3069	2910	.82	< .001	>20000	.00
4	67	-5447	3050	2837	.82	< .001	10755	.88
5	84	-5394	3054	2788	.80	< .001	0.13	.12
6	101	-5345	3068	2748	.80	< .001	<0.01	.00

Note. LL = log-likelihood; *BIC* = Bayesian information criterion; *SSABIC* = sample size adjusted Bayesian information criterion; *BLRT p* = bootstrap likelihood ratio *p*-value; *BF* = Bayes factor; *cmP* = approximate correct model probability. The *BIC* and *SSABIC* advocate for different solutions, with the *BIC* being lowest for the 4-class solution and the *SSABIC* being lowest for the 6-class solution. The *cmP* is above .10 for the 4- and 5-class solutions and the *BF* is >1 for the 3- and 4-class solutions, making these solutions potential candidates. The *BLRT* is significant for all models, indicating solutions with more classes fit significantly better than models with fewer classes. Because most indices favor the 4-class model, this model was championed as the final solution. The entropy for the 4-class model is 0.82, indicating moderately high classification accuracy.

[a] The Bayes factor compared the *C* class model to the *C*-1 class model.

Figure 1

Estimated Conditional Probabilities of a "will do this" Response by Activity and Class for the 4-class Solution.
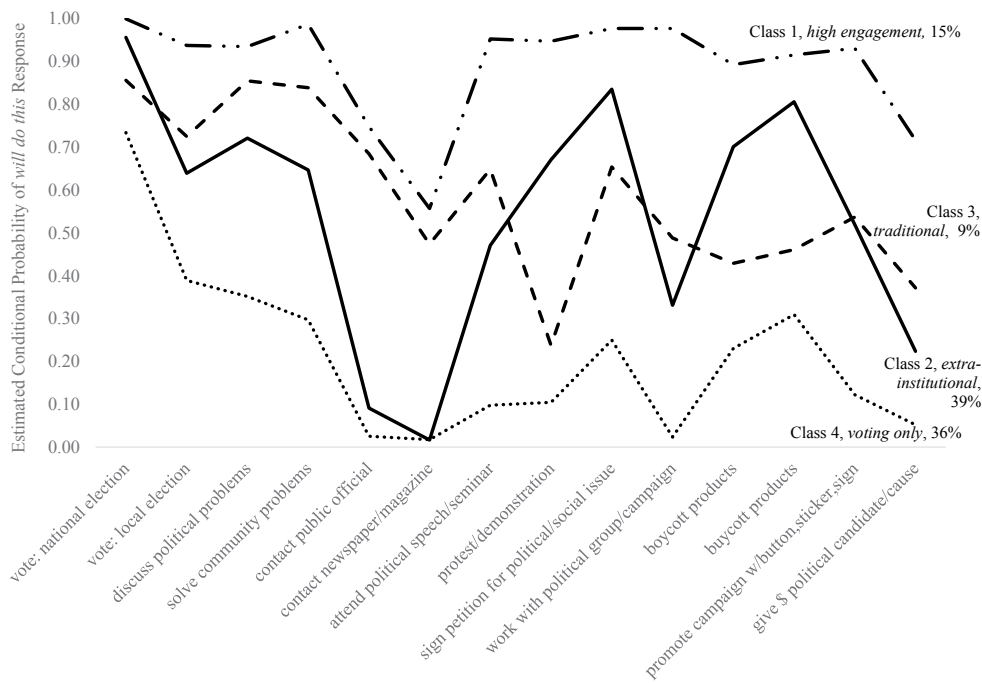
Table 3

Estimated Conditional Probabilities of a "will do this" Response for Each Activity and Class and a Comparison of Select Classes for the 4-class Solution

Item Label	high engagement	extra-institutional	traditional	voting only	OR	RR
vote: national election	**1.00**	**0.96**	**0.86**	**0.73**	3.68	1.12
vote: local election	**0.94**	0.64	**0.73**	0.39	1.49	1.13
discuss political problems	**0.93**	**0.72**	**0.85**	0.35	2.28	1.19
solve community problems	**0.99**	0.65	**0.84**	0.30	2.84	1.30
contact public official	**0.75**	0.09	0.68	0.03	**21.67**	7.52
contact newspaper/magazine	0.56	0.02	0.47	0.02	**53.43**	28.58
attend political speech/seminar	**0.95**	0.47	0.65	0.10	2.08	1.38
protest/demonstration	**0.95**	0.67	0.24	0.10	**6.55**	2.83
sign petition for political/social issue	**0.98**	**0.84**	0.65	0.25	2.69	1.28
work with political group/campaign	**0.98**	0.33	0.49	0.02	1.92	1.47
boycott products	**0.89**	**0.70**	0.43	0.23	3.12	1.63
buycott products	**0.92**	**0.81**	0.46	0.31	4.85	1.75
promote campaign with button, sticker, sign	**0.93**	0.52	0.54	0.12	1.07	1.03
give $ political candidate/cause	**0.72**	0.22	0.37	0.05	2.06	1.66
Percent of population in each class	15%	39%	9%	36%		

Note. Estimated conditional probabilities >.7 are shown in bold as are OR values > 5. The class with the largest estimated conditional probability was used in the numerator for calculation of the OR and RR. *OR* = odds ratio; *RR* = relative risk

engagement class. The class with the lowest amount of anticipated action is Class 4 which contains a sizeable percentage of students (36%) and is characterized only by intentions to vote in national elections. We describe these students as the *voting only* class.

Classes 2 and 3 are both "in between" the two extreme classes (i.e., Classes 1 and 4). Class 2 consisted of 39% of the students, making it the largest class and Class 3 consists of 9% of the students, making it the smallest class. To inform what labels to use to characterize these classes, we considered the activities on which the two classes differed the most as indicated by the odds ratios and relative risks (see Table 3). The largest odds ratios for Classes 2 and 3 are associated with their anticipated participation in certain political voice activities, with Class 3 more likely to respond *will do this* to these activities than Class 2. Specifically, Class 3 is 28.58 times more likely than Class 2 to claim they will contact a newspaper or magazine. Class 3 is also more likely than Class 2 to contact a public official to obtain assistance or voice opinions. The estimated probability of responding *will do this* for this activity is .68 for Class 3 and only .09 for Class 2, making Class 3 7.52 times more likely to endorse this item than Class 2. Although not as large, another difference between Classes 2 and 3 is in their anticipated engagement in protest activities, with Class 2 being 2.83 times more likely than Class 3 to claim anticipated participation in protests, marches, or demonstrations. Also noteworthy are the higher estimated probabilities of responding *will do this* for Class 2 relative to Class 3 on the boycotting and buycotting items.

Several of the activities on which Classes 2 and 3 differ are distinguished by whether they are traditional or extra-institutional activities[2] (Theocharis & Lowe, 2016). Traditional activities, like contacting a public official, are explicitly directed towards representative officials (e.g., political parties, elected representatives, government personnel, civil servants). Although representatives could be the target of extra-institutional activities, these activities are more often used to get the attention of companies, capture media attention, or influence public opinion (Teorell et al., 2007). Examples of extra-institutional activities include protesting and political consumerism. Because Classes 2 and 3 differ in their potential to engage in activities distinguished in this manner, we call Class 2 the *extra-institutional* class and Class 3 the *traditional* class.

[2] Similar distinctions between activities have been made by Ekman and Amnå (2012) and Teorell et al. (2007).

Table 4

Research Used to Formulate Validity Study Hypotheses

Gender	Hypothesis
• Males overrepresented in *electoral specialist* group (Keeter et al., 2002; Lopez et al., 2006). • More males reported engaging in traditional forms of participation (Brunton-Smith & Barrett, 2015; Marien et al., 2010). • In some countries, males scored higher on average on a scale measuring expected future participation in traditional political activities (Amadeo et al., 2002). • Slightly more females than males in *political specialists* group in 2008, but slightly more males than females in 2010 (Kawashima-Ginsberg, 2011).	Overrepresentation of males in *traditional* class
• Young women (18-24) surveyed in 2018 found to be more likely to engage in social movements and activism (Center for Information and Research on Civic Learning and Engagement [CIRCLE], 2020). • Of 18-21 year-olds surveyed in 2020, more females (36%) reported participating in a march or demonstration than males (20%) (Center for Information and Research on Civic Learning and Engagement [CIRCLE], 2020). • In 4 of 16 countries, women found more likely to engage in non-violent protest (Amadeo et al., 2002). • A higher percentage of females reported participating in some non-traditional forms of participation, including demonstrating/protesting and political consumerism (Marien et al., 2010).	Overrepresentation of females in *extra-institutional* class
• Overrepresentation of females in *broadly engaged* group in 2008 and 2010 (Kawashima-Ginsberg, 2011). • Young men and women equally likely to be in *dual activist* group (Lopez et al., 2006).	Overrepresentation of females in *high-engagement* class [a]
• Slightly more males than females in *only voted* group in 2008 and more males than females in civically alienated group in 2008 and 2010 (Kawashima-Ginsberg, 2011). • Young men and women equally likely to be in disengaged group (Lopez et al., 2006).	Overrepresentation of males in *voting only* class [a]
Political Ideology	Hypothesis
• Relative to the *dual activist* group, the *electoral activists* had slightly more Republicans than Democrats (Lopez et al., 2006).	Overrepresentation of conservatives in *traditional* class
• Independents overrepresented in the *disengaged* group; those in *highly disengaged* group less likely to be aligned with a party (Lopez et al., 2006).	Overrepresentation of "middle-of-the-road"s in *voting only* class
• Democrats more likely to report participating in protests (Lopez et al., 2006). • Young adult voters for Clinton in 2016 more likely than Trump voters to say they have or would participate in demonstrations, marches, and political consumerism (Center for Information and Research on Civic Learning and Engagement [CIRCLE], 2017).	Overrepresentation of liberals in *extra-institutional* class
• Relative to the *highly disengaged* group, the *hyper-involved* class (10+ types of participation) is more likely to be Democrats or liberals (Lopez et al., 2006). • Young adult Clinton voters in 2016 more broadly engaged (have participated or are more willing to participate in a larger number of activities) than Trump voters (Center for Information and Research on Civic Learning and Engagement [CIRCLE], 2017).	Overrepresentation of liberals in *high engagement* class

[a] Greater weight given to the more recent study in formulating this hypothesis.

In summary, our results suggest four classes exist, with the two largest classes being the *extra-institutional* class (39%) and the *voting only* class (36%) and the two smallest classes including the *high-engagement* class (15%) and the *traditional class* (9%).

Validity Study[3]

Our hypotheses regarding the relationship between class membership and the two variables (i.e., gender, political ideology) used in the validity study are provided in Table 4 along with the research used to formulate the hypotheses. The results of the validity analyses are shown in Table 5. Results indicated statistically significant relationships between class membership and gender (χ^2 (3) = 29.68, $p < .001$) and political ideology (χ^2 (6) = 130.67, $p < .001$). In agreement with our hypotheses on gender, results indicated an overrepresentation of females in the *extra-institutional* class and an overrepresentation of males in the *traditional* class. There were 7% more females in the *extra-institutional* class and 5% more males in the *traditional* class relative to the overall sample. There was also an overrepresentation of males in the *voting only* class as hypothesized with 5% more males in this class than in the overall sample. Because the same proportion of males and females were found in the *high- engagement* class, our hypothesis of an overrepresentation of females in this class was not supported.

All the hypotheses regarding political ideology and class membership were supported. We hypothesized conservative students would be overrepresented in the *traditional* class and indeed, there were 9% more conservative students in this class than in the overall sample. There were 11% and 17% more liberal students in the *extra-institutional* and *high-engagement* classes than in the overall sample, supporting our hypotheses that liberal students would be overrepresented in these classes. Finally, there were 13% more middle-of-the-road students in the *voting only* class than in the overall sample, supporting our hypothesis. Given the majority of results aligned with our hypotheses, the validity study findings generally support our class interpretations.

> **In agreement with our hypotheses on gender, results indicated an overrepresentation of females in the extra-institutional class and an overrepresentation of males in the traditional class.**

Discussion

It is essential for colleges and universities to serve and invest in their civic missions by preparing students to be active and informed participants in our democracy. To measure how college students intend to participate, we need items to capture their anticipated behavior and analytical tools to summarize the results in meaningful and understandable ways. We used a popular set of political participation items along with LCA to identify four unique political participation profiles whose interpretations were generally supported by our validity analyses. Our study illustrates how LCA can be used as an alternative to subscale scores for summarizing the political participation items and offers a promising first step in understanding how college students might be classified based on their anticipated political actions. Below, we outline implications for both future research and practice in assessing and promoting political engagement in college students.

Implications for Future Research

LCA results are dependent on the items and sample used in the analysis. To fully

understand the college student population and their intentions for political action, more research is needed utilizing different samples and different sets of items. Specifically, additional studies are needed to explore if and how the number and nature of profiles differs when the analysis is based on a wider variety of college students and institutions, particularly samples more diverse with respect to race, SES, location, and class level. Our validity evidence generally supported the class interpretations, but explored a limited number of hypotheses

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[3] We used a two-step approach to acquire validity evidence for our LCA solution that involves first, classifying each student into a single class and second, relating class membership to auxiliary variables. Use of a two-step approach assumes perfect classification. Based on the entropy value in Table 2, we know our classification accuracy is good, but it is not perfect. Supplemental material for this article available from the first author contains results from our study using an alternative analytical technique that takes classification accuracy into account. Conclusions did not differ across methods.

Table 5
Validity Study Results

Variable		N	Proportions of Students in Each Class				Standardized Residuals			
			Class				Class			
			1	2	3	4	1	2	3	4
			high engagement	extra-institutional	traditional	voting only				
Gender	Female	415	0.15	0.47	0.04	0.33	0.07	**4.40**	**-3.98**	**-2.33**
	Male	289	0.15	0.31	0.13	0.42	-0.07	**-4.40**	**3.98**	**2.33**
	Overall	704	0.15	0.40	0.08	0.37				
Political Ideology	Liberal	194	0.32	0.52	0.04	0.12	**7.73**	**3.86**	**-2.68**	**-8.18**
	Middle-of-the-Road	390	0.06	0.36	0.08	0.49	**-7.22**	**-2.49**	-0.39	**8.13**
	Conservative	112	0.16	0.35	0.17	0.32	0.32	-1.34	**3.79**	-1.01
	Overall	696	0.15	0.41	0.08	0.36				

Note. A group is overrepresented in a class when the proportion of students in the class is greater than the same proportion for the overall sample. For example, females are overrepresented in the extra-institutional class because the proportion of females in the extra-institutional class (.47) exceeds the corresponding proportion for the overall sample (.40). Similarly, a group is underrepresented in a class when the proportion of students in the class is less than the same proportion for the overall sample. For example, liberal students are underrepresented in the voting only class because the proportion of liberal students in the voting only class (.12) is less than the corresponding proportion for the overall sample (.36).

using only a single sample. For a more comprehensive view of college student participation, more LCAs and associated validity studies are needed using different samples and exploring a larger number of hypotheses.We provided technical details for our analyses in the article's supplement (available from the first author) and made both the data and syntax for this study openly available to encourage the exploration of political participation profiles at other institutions.

Future research should also consider what items should be used to measure the political participation of the modern-day college student. In our study, only 14% of students or less anticipated contacting a newspaper, magazine, radio or TV show, or working as a canvasser. Because the low endorsement of these items might be indicative of an increased preference for online outlets, scale alterations might consider how college students politically engage online including their use of social media (Vromen et al., 2015). Changes to items might also be informed by research considering the extent to which college students' identities are aligned with traditional political organizations (e.g., political parties) versus projects through which they seek to express their identity (e.g., an online organization devoted to addressing climate change) (Marsh & Akram, 2015). Other possibilities for scale revision include more items about civic activities (e.g., community service), staying informed, serving as a poll worker during elections, and participation in the governance of their respective academic institutions.

Other avenues for future research include the framing of the items and the response scale. As intended political behavior is not the same as actual behavior (Achen & Blais, 2015; Persson & Solevid, 2014), future research should also explore if LCA results vary when framing the items not as "intended action" but as "actions taken." It would also be worthwhile to consider whether LCA solutions depend on the response scale for the items and whether the response scale is collapsed. We collapsed the 6-point response scale for the items into two categories, but different classes may have emerged had we not collapsed the response scale or had collapsed it in a different way.

It is essential for colleges and universities to serve and invest in their civic missions by preparing students to be active and informed participants in our democracy.

Implications for Practice

Assessing Political Participation

Political participation normally describes only the number of activities a student will participate in, offering limited information as to the nature of their engagement. To summarize the example earlier in this article, two students could choose to participate in two different forms of political activity, but that does not mean they are both equally engaged. As a result, summing scores and/or using subscales does not offer good insight into how politically engaged a campus is. Using a classification technique like LCA allows administrators to determine the nature of participation by uncovering groups of students with unique patterns of participation. With LCA, one can see the patterns of involvement in a student body, therefore more accurately describing political engagement on campus.

Using Results for Programming

In response to their own LCA results, Brunton-Smith and Barrett (2015) noted, "The existence of different groups of participants suggests than any interventions designed to promote participation need to be shaped in a way that recognizes these differences, rather than attempting to adopt a 'one size fits all' approach" (p. 208). The emergence of varying profiles in the current study is a reminder to educators designing and implementing civic engagement programs for college students to avoid a 'one size fits all' approach. Instead, we must recognize the diversity of the student body and be sensitive to the variability in backgrounds and experiences that make various forms of political action more or less appealing to different students. The use of LCA with political engagement items provides rich information about students' diverse intentions. Armed with such information, campuses can connect individual students to programming appropriate for their current intentions, develop new programs to address the myriad pathways for engagement, or assess how the nature of students' intentions change with various college experiences.

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The results of our own LCA indicate that quality programming is needed. Although a completely disengaged profile did not emerge in our results[4], we are still concerned about the *voting only* group which consisted of over one-third of the student body. It is encouraging that these students are not completely disengaged, but still worrisome because more people say they intend to vote than actually do, particularly young adults (Achen & Blais, 2015). It is also worrisome because if those in the voting-only group do follow through with their intentions, it limits the amount of influence in democracy this large group of students will have relative to those in the other classes.

Unfortunately, the mismatch between intentions and actions applies to many political behaviors, not just voting (Persson & Solevid, 2014). All of our classes intend to engage in at least one political behavior in the future, but intervention might be needed during their college career to transform their intentions into action. How can educators deepen students' commitment to political action? Holbein and Hillygus (2020) argue that low participation rates among young people is not a function of disinterest, despite popular yet unsupported narratives. Many students arrive on campus with deep concerns about a myriad of public issues, but lack pathways to address them in ways that extend beyond volunteerism and community service. Colleges and universities can reduce the gap between intentions and actions by ensuring students understand levers for change, the many entry points for participating in our political system, and emphasizing how decisions are made in a democratic society. Accruing such knowledge is necessary, yet still insufficient to prepare students for civic engagement. It is also important for students to develop skills allowing them to address effectively public issues and dispositions to prepare them for opposing perspectives. This can be done by embedding civic learning opportunities into courses and curricula in collaboration with faculty and academic leaders, as well as through co-curricular activities that utilize public

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[4] We suspect a completely disengaged profile did not emerge in our results because of our focus on college students. Political participation, including voting, is more likely for those with higher levels of educational attainment (Schlozman et al., 2018).

spaces, thereby strengthening the campus climate for democratic engagement. Doing so will simultaneously serve particularly samples more diverse with respect to race, SES, location, and class level. Our validity evidence generally supported the class interpretations, but explored a limited number of hypotheses using only a single sample. For a more comprehensive view of college student participation, more LCAs and associated validity studies are needed using different students interested in addressing issues of concern and our democracy by ensuring colleges and universities are fulfilling their civic mission and serving the public good.

By using LCA, college administrators and educators can determine what programs to create in order to catalyze students' involvement in the political realm.

Conclusion

With the call for higher education to strengthen its focus on students' development as active and informed participants in civic and political life, educators need to assess the efficacy of their programs or use student data to create programs to increase political action. This study demonstrated using an alternative way of summarizing items on a political participation measure. By using LCA, college administrators and educators can determine what programs to create in order to catalyze students' involvement in the political realm. In our example, we found four classes of students, each with different intentions for political action, which can be used to inform and assess programming on our campus. Other colleges and educators are encouraged to use the same process to increase the quality of political participation programming to ensure the call from A Crucible Moment is answered on their respective campuses.

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