

Project Implementation and Evaluation

Implementation

The pre-lesson survey, PowerPoint lesson, and post-lesson surveys were developed and distributed to SRNAs in Illinois. There is a total of five nurse anesthesia schools in the state of Illinois. During the Fall semester of 2022, 320 nurse anesthesia students were enrolled at a university in Illinois. The lesson and surveys were disseminated via email. In addition, a reminder email and a final call email were sent. Data were collected until the first week of January 2023. A total of 221 students opened the email. However, only 51 students completed the pre-lesson survey, and 39 students completed the post-lesson survey. Hence, fifty-one participants' pre-lesson survey results were analyzed to determine barriers to political participation and political astuteness of SRNAs in Illinois, and thirty-nine participants' post-lesson survey results were analyzed to determine the impact of the education material on the nurse anesthesia students.

Results

Pre-Lesson Survey Part-One: Demographics

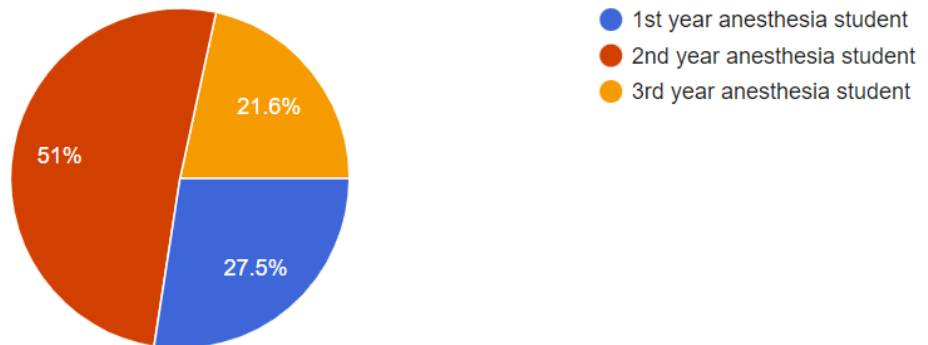
The pre-lesson survey aimed to assess SRNAs' political literacy and engagement, evaluate political astuteness and identify barriers to political participation among SRNAs. A total of 51 SRNAs completed the pre-lesson survey. Demographic information, including age, gender, race or ethnicity, number of years of prior nursing experience, and student classification level, was collected from participants. The demographic data are summarized in table 1. A total of 51% (n=26) second-year nurse anesthesia students, 27.5% (n=14) first-year nurse anesthesia students, and 21.6% (n=11) third-year nurse anesthesia students participated in the survey (Figure 1).

Table 1. Demographic Data of the Participants

Characteristics	Participants % (n)
Age (years)	
25-30	62.7% (32)
31-35	27.5% (14)
35-40	5.9% (3)
40-45	2% (1)
45-50	2% (1)
Gender	
Female	80.4% (41)
Male	19.6% (10)
Ethnicity	
White/Caucasian	84.3% (43)
Black or African American	11.8% (6)
Asian/Pacific Islander	2% (1)
Hispanic	2% (1)
Nursing Experience (years)	
1-5	62.7% (32)
6-10	29.4% (15)
11-15	3.9% (2)
>16	3.9% (2)
Classification Level	
1st-year anesthesia student	27.5% (14)
2nd-year anesthesia student	51% (26)
3rd-year anesthesia student	21.6% (11)

Figure 1. Nurse Anesthesia Students' Classification Level

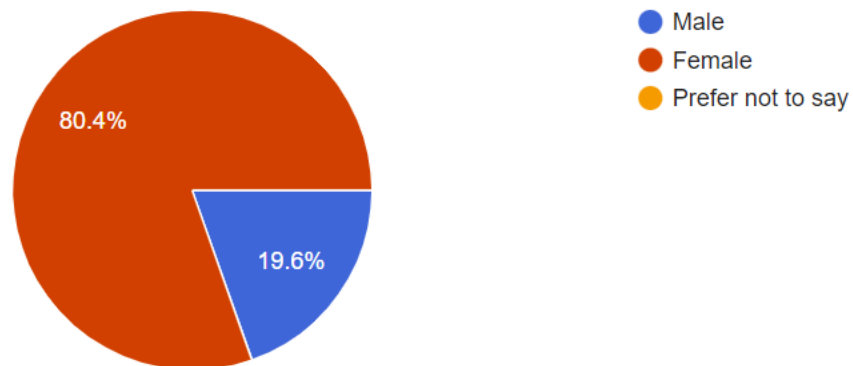
51 responses



The majority of the participants, 62.7% (n=32), had prior nursing experience between one and five years. 29.4% (n= 15) of the students had six to 10 years of nursing experience, and 3.9% (n=2) had prior nursing experience between 11 and 15 years. Only 2 participants, 3.9% (n=2), had more than sixteen years of nursing experience. A total of 80.4% (n=41) females and 19.6% (n=10) males participated in the survey (Figure 2).

Figure 2. Participants Gender Distribution

51 responses



Pre-Lesson Survey Part Two: Barriers to Political Participation

The first research question of the pre-lesson survey was about barriers to SRNAs' political participation. Here, nurse anesthesia students were asked to identify common factors that they considered barriers to their political participation. The responses in this section were analyzed using frequencies and percentages (Figure 3 and Table 2). The most frequently reported barriers to political participation were identified as having little free time (82.4%), lack of political literacy (54.9%), and lack of social/political connections (37.3%). In addition, 33.3% (n=17) of the SRNAs responded that one of the barriers to participating in political activities is that they are not interested in politics.

Figure 3. Barriers to Political Participation

51 responses

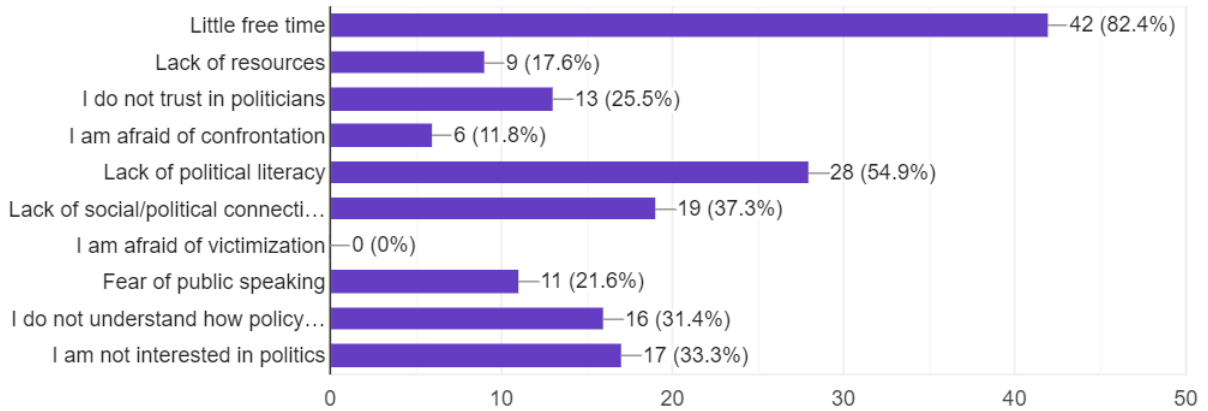


Table 2. Barriers to Political Participation

Barrier	Frequency	% (n=51)
Little free time	42	82.4
Lack of resources	9	17.6
I do not trust politicians	13	25.5
I am afraid of confrontation	6	11.8
Lack of political literacy	28	54.9
Lack of social/political connections	19	37.3
I am afraid of victimization	0	0
Fear of public speaking	11	21.6
I do not understand how policy works	16	31.4
I am not interested in politics	17	33.3

***Note. There were multiple-choice options in this section, and respondents were asked to choose all that applied.

Pre-Lesson Survey Part-Three: Modified Political Astuteness Inventory (PAI)

The third part of the pre-lesson survey included the modified version of the Political Astuteness Inventory (PAI) survey. The modified PAI consisted of 38 questions. Each question answered with yes was worth one point. A total score was calculated by adding the number of points. Based on the total score, four levels of political astuteness were categorized: totally unaware politically (0–9 points); slightly more aware of the implications of political activity for nurse anesthesia (10–19 points); beginning political astuteness (20–28 points); and politically

astute, an asset to nurse anesthesia (29–38 points). Figure 4 displays the distribution of points scored among the number of respondents. The total points scored per participant ranged from 5 to 32 points. The average score was 14.22, and the median was 13.

Figure 4. Total Points Scored Distribution

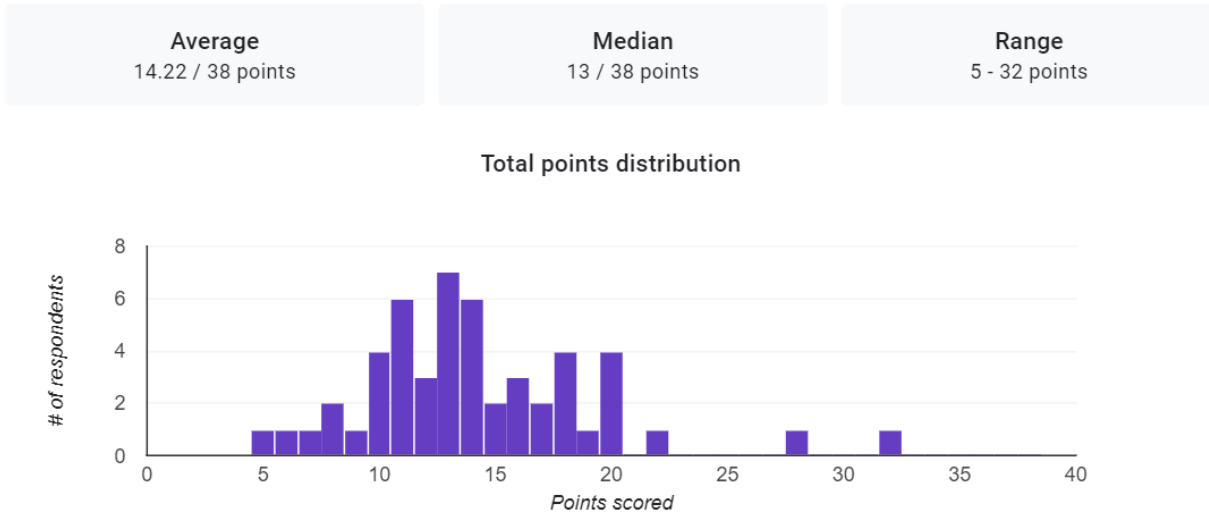


Table 3 shows the frequencies and percentages of participants’ political astuteness levels. Most responders ranked slightly more aware of the implications of political activity (74.5%, n=38). Only one nurse anesthesia student ranked as politically astute (2%). However, six responders were classified as totally unaware politically (11.75%).

Table 3. Frequencies and Percentages of the Categories of Political Astuteness

Category of Political Astuteness	Score	Frequency	% (n=51)
Totally unaware politically	1-9	6	11.75
Slightly more aware of the implications of political activity for nurse anesthesia	10-19	38	74.5
Beginning political astuteness	19-28	6	11.75
Politically astute, asset to nurse anesthesia	29-38	1	2
Mean PAI score	14.22		
Standard Deviation (SD)	5.0		
Variance	25.5		

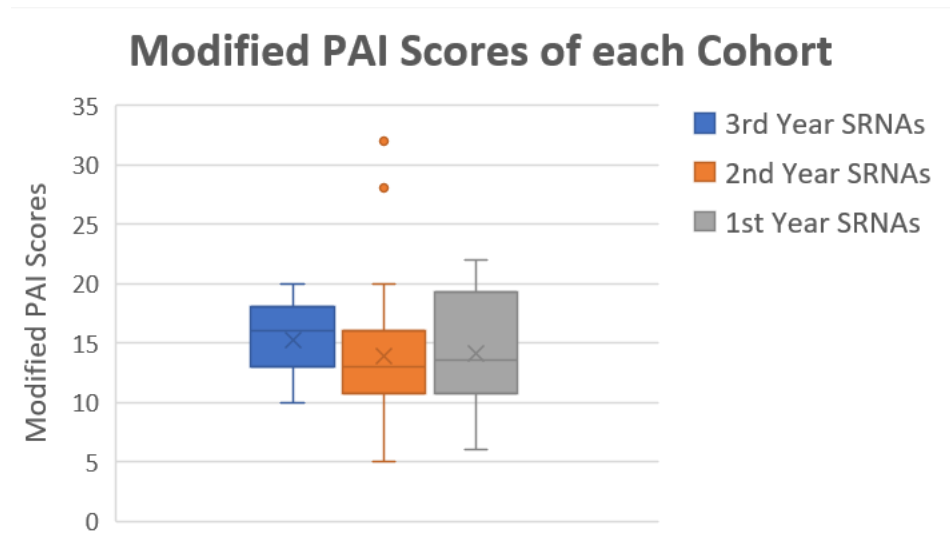
Students' data were grouped based on the classification level of all the SRNAs. These groups included first-year, second-year, and third-year nurse anesthesia students. The PAI scores of each cohort were analyzed. Mean PAI scores among all three cohorts were similar (Table 4). However, the variance was higher in the second-year cohort. This result reveals a distribution of the data recorded in this group had a higher range and was more spread out ($S^2=34.7$).

Table 4. Mean PAI Scores, Standard Deviations, and Variances per Cohort.

Cohort Classification	Mean PAI Score	SD	Variance (S^2)
1 st Year Nurse Anesthesia Students	14.1	4.75	22.53
2 nd Year Nurse Anesthesia Students	13.8	5.89	34.7
3 rd Year Nurse Anesthesia Students	15.3	3.13	9.81

Figure 5 displays the box and whisker plots for the modified PAI scores of each cohort. Visual comparison of the length of each box indicates that the variations in the results are greater among the students enrolled in the first year of CRNA school. However, the overlap of boxes for each nurse anesthesia cohort suggests that there is no visual difference in the political astuteness and participation between the three cohorts.

Figure 5. Box and whisker plot for Modified PAI Scores of each Cohort.



When comparing the interquartile ranges (IQRs) in Figure 5, the similarities continue (third-year SRNAs' IQR=5, second-year SRNAs' IQR=5.25, first-year SRNAs' IQR=8.5). Then, the first visual impression is that PAI scores among cohorts are similar. Thus, we can infer that the classification level of nurse anesthesia students does not affect the level of political astuteness of SRNAs.

The thirty-eight modified PAI questions were analyzed individually, then categorized into six different groups: voting behavior, professional organization participation, awareness about health policy issues, knowledge of the legislative and policy processes, knowledge of legislators, and involvement in the political process.

Table 5 lists all the modified PAI questions and frequencies for all items. Responses to questions determined to be part of the same category were summed and divided by the number of items. Means, standard deviations, and reliability for each category are also displayed. The reliability estimation of each question category was calculated using the internal consistency coefficient alpha (Cronbach's α). Reliabilities ranged from .42 to .85. the category "Knowledge of legislators" had a reliability of .85. The category of "knowledge of the legislative and policy processes" had a reliability of .61. The result showed that these two categories have good internal stability and consistency, suggesting these two categories demonstrate a very high value of validity and reliability and are instruments that provide credible data for this research. However, the rest of the categories had a reliability of less than 0.6 (.52, .45, .42, and .50). Therefore, these categories may require additional improvement to meet the appropriate criteria for scoring each concept.

Table 5. Frequencies and Percentages of each Political Astuteness Inventory Items; and Means, Standard Deviations, and Reliability

Category/Question	n	%	M	SD	Cronbach's α
Voting Behavior			.78	.14	.52
I am registered to vote, or I am planning to register to vote in the next election.	49	96.1			
I know where my voting precinct is located.	43	84.3			
I voted in the last presidential election.	42	82.4			
I voted in the last two elections.	34	66.7			
I was acquainted with the majority of the issues at the last election.	31	60.8			
Professional Organization Participation			.68	.12	.45
I belong to the state professional organization – The Illinois Association of Nurse Anesthetists (IANA).	37	72.5			
I currently participate or would like to participate in the IANA in the future.	38	74.5			
I attended the last conference held by the IANA	40	78.4			
I attended the last conference held by the AANA.	12	76.5			
I am aware of at least two issues discussed at the convention.	38	74.5			
I read literature published by the IANA or American Association of Nurse Anesthesiologists (AANA).	29	56.9			
I receive AND read emails from the IANA and/or the AANA.	23	45.1			
Awareness about health policy issues			.69	.26	.42
I try to stay informed about current health issues.	44	86.3			
I know of at least one issue, related to nurse anesthesia, currently under discussion at the state or national level.	42	82.4			
I know of at least two health-related issues which are currently under discussion at the state or national level.	20	39.2			
Knowledge of the legislative and policy processes			.09	.06	.61
I know the process by which a bill is introduced in my state legislature.	9	17.6			
I know who to contact for information about health-related issues at the state or federal level.	6	11.8			
I know which house and senate committees usually deal with health-related issues.	4	7.8			
I know which senators or representatives are supportive of nursing and nurse anesthesia.	1	2			
I know the committees on which my representatives hold membership	2	3.9			
I know whether or not the IANA employs lobbyists at the state or federal level.	9	17.6			
I know how to contact the IANA lobbyist.	3	5.9			
I know the names of at least two members of the IANA board of directors.	9	17.6			
I know the process whereby one becomes a board member of the IANA.	2	3.9			
Knowledge of Legislators			.20	.06	.85
I know the names of my senators in Washington, DC.	13	25.5			
I know the names of my representatives in Washington, DC.	8	15.7			
I know the name of the state senator from my district.	14	27.5			
I know the name of the representative from my district.	14	27.5			
I know how to find my senator or representative voting record.	7	13.7			
I know how find my senator or representative voting stand in relation to a specific health issue.	8	15.7			
Involvement in the political process			.23	.19	.50
After graduation, I will contribute financially to the IANA Political Action Committee (PAC).	24	47.1			
I actively supported a senator or representative (campaign contribution, campaigning service, wore a button, or other) during the last election.	4	7.8			
I have sent a letter regarding a health issue to one of my state or national representatives.	14	27.5			
I am professionally acquainted with a senator or representative or a member of their staff	0	0			
After graduation, I plan to serve as a resource person for one of my representatives or their staff.	3	5.9			
I plan to attend public hearings related to health issues.	11	21.6			
I find myself more interested in political issues now than in the past.	28	54.9			
I attended legislative update sessions at any of the IANA or AANA conferences.	10	19.6			

The two categories that demonstrated high reliability were the two with the lowest median. Thus, we can infer that SRNAs in Illinois possess a low knowledge of legislators and a very low knowledge of the legislative and policy processes (Table 5).

Post-Lesson Survey

The purpose of the PowerPoint lesson was to educate nurse anesthesia students on current issues that affect the CRNA profession and patient care. In addition, SRNAs were guided on how to become more politically active. The purpose of the post-lesson survey was to evaluate the efficacy of the lesson in increasing political participation, political literacy, and political astuteness among nurse anesthesia students. After completing the PowerPoint lesson, a website link to access the post-lesson survey was provided. The survey was composed of 5 Likert scale questions. In addition, students had the opportunity to receive a certificate to prove the completion of the lesson. A total of 39 SRNAs completed the post-lesson survey.

After reviewing the scores, it was found that the majority of the nurse anesthesia students that completed the study strongly agreed that PowerPoint lesson allowed them to understand how to locate current bills that affect nurse anesthesia practice (84.6%, n=33), how to find a senator/representative voting record (84.6%, n=33), how to contact the IANA lobbyist (87.2%, n=34), and how to contribute and participate in the IANA political action committee (89.7%, n=35). Scores were more distributed along the scale in the last question. Only fifteen students strongly agreed to participate in the political process by contributing to the IANA PAC, contacting a legislator, or serving as a resource person for a representative. Sixteen students agreed, five neither agreed nor disagreed, and three disagreed. Figure 6 displays the distribution of the scores of the five Likert scale questions of the post-lesson survey.

Figure 6. Post Survey Results and Distribution of the Likert Scale Scores

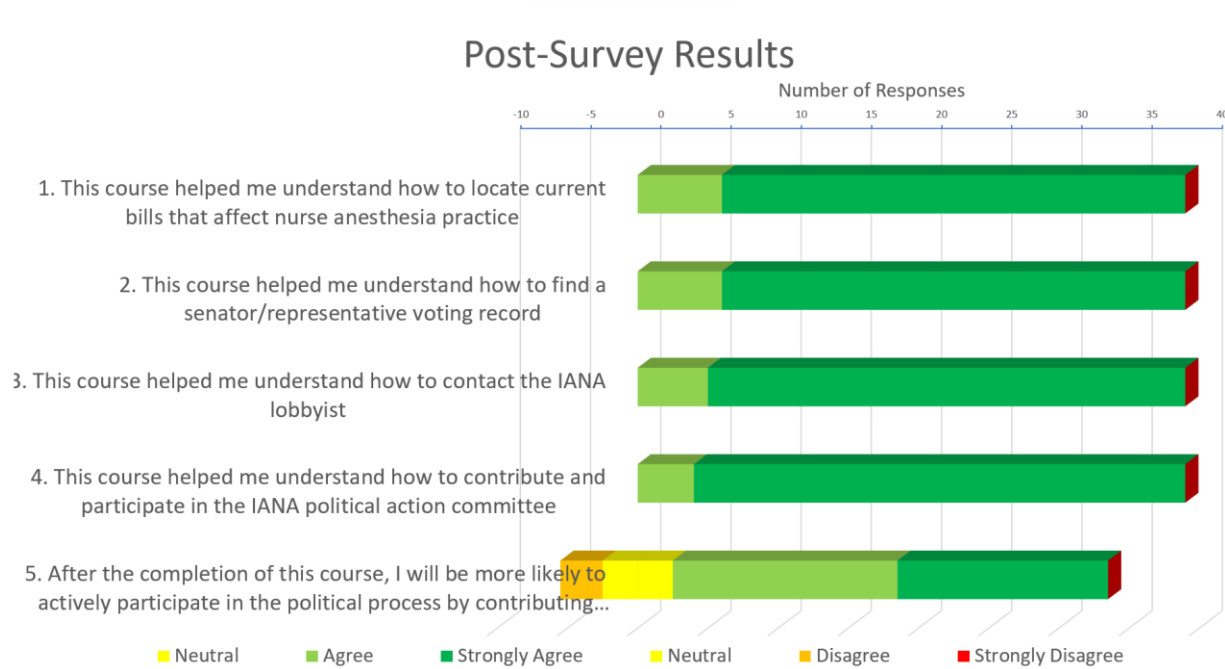


Table 6. Frequencies of each Question of the Post-Lesson Survey; and Means, Standard Deviations, and Questionnaire Reliability

	Question 1	Question 2	Question 3	Question 4	Question 5
Score	189	189	190	191	160
Mean	4.85	4.85	4.87	4.9	4.1
SD	.37	.37	.34	.31	.91
Variability	.13	.13	.12	.09	.83
Questionnaire Cronbach's α			.74		

Table 6 lists the frequencies for all five items of the post-lesson questionnaire. In addition, each question's means, standard deviations, and variabilities are also displayed. The reliability estimation of the entire questionnaire was calculated using the internal consistency coefficient alpha (Cronbach's α). The Cronbach's α for the entire post-lesson questionnaire was .74. This reliability showed that this survey has good internal stability and consistency. This

result means that this group of questions demonstrates a high value of validity and reliability and is a great instrument that provides credible data for this research.

Discussion

The analysis of the modified PAI scores indicated that nurse anesthesia students have minimal understanding of legislative and policy processes, limited knowledge of how they are represented at the House and Senate levels and lack the motivation to get involved and participate in the political processes. These scores suggest that the focus on increasing political astuteness among nurse anesthesia students should be educating them on how policy works.

Thus, nurse anesthesia programs and professors must ensure that policy classes are included in the curriculum. They must pay special attention to the content included in these courses and ensure that students understand how policy works, how to contact their representatives, and how to become more politically active. In addition, more opportunities for political participation must be included, such as lobby day, campaigning for or against candidates in partisan elections, organizing political rallies, or becoming a resource person for representatives or their staff.

Results and analysis of the post-lesson survey demonstrated that the PowerPoint lesson successfully helped nurse anesthesia students understand how to locate current bills that affect nurse anesthesia practice, how to find a senator/representative voting record, how to contact the IANA lobbyist, and how to contribute and participate in the IANA political action committee. However, it is unlikely that this study increased SRNA's willingness to participate in the political process.

Limitation

The most significant limitation of this project was the lack of participation among the nurse anesthesia students. The low response rate from the targeted population limits the power and generalizability of the results of this project. Besides the email being delivered to the recipients three times, only 15.9% (n=51) of nurse anesthesia students participated. Therefore, it is difficult to generalize and assume that the results reflect the political astuteness of the entire population of SRNAs in Illinois. Plausible causes of poor participation could be related to access-limiting Spam software, disinterest in study participation due to time constraints, stress levels, or preexisting negative ideas related to political activism.

Another limitation of the project was the timing of the implementation of the project. The surveys and lessons were available starting December 2022 to the first week of January 2023. These dates overlapped with Fall semester finals, the holiday season, and the beginning of the Spring semester. Thus, students were occupied with other activities such as preparing for final exams and final projects, enjoying time with family during the holiday break, and getting ready to start a new school semester.

Impact to Practice

Decisions made at the national or state level will continue to impact the professional careers of CRNAs. Thus, political advocacy is necessary to safeguard the profession and expand independent practice. Other groups cannot design healthcare policies and nurse anesthesia practice. Instead, it should be shaped by the CRNAs' clinical experience, knowledge, and understanding of patient care.

Political participation has also secured better work conditions for current and future CRNAs. This effort has been translated into better patient care. CRNAs provide anesthesia

services in any possible location and setting and are trained to perform every type of anesthetic for every procedure. CRNAs provide safe and cost-effective anesthesia services that rural counties can afford. Thus, allowing CRNAs to practice independently allow patients to benefit from safe and accessible anesthesia care.

Thus, it is our duty as professionals to help and guide lawmakers to expand the independence of nurse anesthetists and magnify the areas where CRNAs can practice independently. In addition, professional advocacy can help alleviate the lack of anesthesia services in rural and poor areas of the United States while maintaining reduced costs and improving care for these individuals.

This project suggests that nurse anesthesia students encounter different barriers that prevent them from participating in political action. These barriers include having little free time, lack of resources, lack of political literacy, and lack of social/political connections. This information can help the IANA and AANA research interventions that can increase political participation among SRNAs.

Conclusion

Recommendations for future study should include the pre-lesson survey, PowerPoint lesson, and post-lesson survey as a mandatory core curriculum in one of the leadership/policy courses offered at the nurse anesthesia programs in Illinois. Making these surveys mandatory can offer complete and comprehensive data collection from all nurse anesthesia students in the state of Illinois. Additionally, a great approach for future study of political astuteness among SRNAs, could be the inclusion of the PAI survey after the PowerPoint lesson. Using the PAI before and after the lesson will help assess student awareness and understanding of the legislative and policy process before and after participating in the learning activity.