

## **A Natural Disaster of Civic Proportions: College Students in the Natural State Fall Short of the Naturalization Benchmark**

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*Democracy depends on an informed citizenry holding public officials accountable for their policies in regular elections. Theory suggests a politically illiterate citizenry is incapable of serving in this capacity. The APSA has made civic literacy a priority in civic education. Using a convenience sample of Arkansas Tech students taking American Government from 2008 to 2011, we assess the extent of student civic literacy across four dimensions: American political heritage, government structure, current politics, and the Constitution. Our instrument consists of 25 questions drawn from the bank of USCIS naturalization test questions. The findings are grim: using the naturalization benchmark (60%) and the standard letter grade-based benchmark, we find that 86.5% of ATU students failed the naturalization test, while 96% failed to score a "C" or better on civic literacy. Contrary to previous research, upon employing a pre- and post-test design we found significant improvement in civic literacy among ATU students after their one semester government class in the fall of 2010. Over 70% of students showed improvement in civic literacy. Furthermore, while 80% of the students failed to meet the naturalization benchmark in the pretest, less than a third failed to meet it in the posttest. We conclude civic courses can be an effective ameliorative for civic literacy deficits, at least in the short term.*

### **Concern for Civic Education and Civic Efficacy in Political Science**

In their seminal study of political knowledge, Delli Carpini and Keeter claim, "For citizens to engage in politics in a way that is personally and collectively constructive...they must have the resources to do so. A central resource for democratic participation is political information (1996, 5)." We



fundamentally agree with this claim, as do many in our profession of political science. In fact, In 1996 APSA organized a Task Force on Civic Education for the 21st century with the aim of assessing the importance of civic education as a function of democracy as well as developing measurements of civic education and objectives for achieving increasing levels of civic knowledge in the U.S. citizenry (APSA 1997). The connection between civic education and the fundamentals of democracy is readily apparent. Citizens lacking political or civic efficacy face steep barriers to effective political participation, even if one assumes the bare-minimum of participation, e.g. voting, and adopts a 'reasoning' voter model of low-information rationality (Popkin 1994). A deficit in effective citizen political participation raises questions of political accountability among government officials and politicians, the capacity for responsible party government, the substantive quality of candidates for office, and the role of public policy in campaigns. In short, democratic societies depend upon a politically efficacious electorate to produce responsive public policy, constrain and influence government and to hold government accountable both retrospectively and prospectively. As the Task Force put it, civic engagement is the "lifeblood of a liberal democracy" (Carter and Elshtain 1997).

Civic education has been a project of APSA since its inception, and a number of APSA committees took on civic education as a primary concern in its early years (Schachter 1998). For example, John W. Burgess believed that political science should "prepare young men for the duties of public life" (Snyder 2001). These earlier political scientists echoed the concerns of modern civic educators and thus established a framework for civic education that remains relevant to this day. Early work focused on political knowledge and the link between civic knowledge and civics instruction as a gateway to increased desire and capacity to participate in politics. This early model of "active citizenship" through experiential learning and a focus on local community is akin to the modern civic education goals of converting an apathetic, politically illiterate, and disengaged citizenry into active participants in civic life (Schachter 1998). Today, APSA's Strategic Planning Committee asserts that "preparing citizens to be effective citizens and political participants" is a central goal of the organization (Snyder 2001). Our research represents a continuation of this professional interest in civic literacy.

The seminal work on political knowledge by Delli Carpini and Keeter in the mid-1990's analyzed 50 years of civic knowledge data. They found that political knowledge in the mass citizenry has remained "remarkably" stable over that period despite radical transformations like technological



innovations in how political information is conveyed, an aggregate increase in the general educational level of the mass public, and in the relevance of politics to the daily lives of citizens (1996, 122). Still, they conclude “[a]lthough what Americans know about politics has changed very little, there is some evidence that it is *changeable*, and although Americans appear less politically educated than one might hope, there is evidence that they are *educable* (1996, 106).

Why Delli Carpini and Keeter raise a glimmer of hope, the mounting evidence of increasing political apathy and decreasing political participation is the prominent story told by social scientists today (APSA 1997, 1998). Of late, increasing attention has turned to civic literacy and the woeful state of the citizenry’s political knowledge base. For example, the Intercollegiate Studies Institute has conducted a number of large-n studies of college student knowledge of civics since 2005. They found that, on average, students were able to answer only half of the questions on American history, government, and foreign and domestic policy correctly. They found little evidence a college education was contributing to improvement in civic knowledge, as college seniors performed no better than freshmen did on the survey (ISI 2006). A contributing factor seems to have been the decrease in the number of government and history oriented classes. According to their study, a five-year-old kindergartner would have scored about 20% on the American civic literacy exam by guessing. The average college freshman scored 50.4% on the civic literacy exam, meaning that the value-added for civic literacy was about 2.3 points per year from kindergarten to high school graduation. However, college seniors scored a 54.2% on the test, meaning the rate of civic literacy improvement in college was only 1.3 points per year – half the rate of improvement in elementary and secondary education. Confirming the expectations of those early APSA committees, the ISI studies found that those students who exhibited greater understanding and knowledge of politics were significantly more likely to engage in citizenship activities (ISI 2006). These results were validated in subsequent follow-ups and extensions of the original survey by ISI (ISI 2007, 2008).

With national studies like those of ISI, the problem of civic literacy in the United States has become well documented. However, these studies do not just identify a problem. They also tend to suggest culprit(s). For example, ISI points the finger at formal educational practices and the lack of a civics emphasis in the curriculum at the collegiate level. ISI argues colleges and universities are failing to meet their civic missions and the public will likely agree given such findings. Yet, social scientific research suggests a more



complicated story. Contrary to what one might assume, past research has resulted in a conventional view within the social sciences that more education matters but increasing the number of civic courses does not. As Niemi and Junn explain in their seminal work on civic literacy at the secondary level of education, most social scientific research holds that the “level of schooling attained makes a difference to what citizens know about politics, but classes in American government and civics do not appear to be responsible for this knowledge” (Niemi and Junn 1998, 3; see also 16–18).

If this conventional view is accurate, then ISI has placed the blame in the wrong area. By simply offering additional years of education, arguably colleges and universities are meeting their civic missions even if they are not increasing the level of civic increase is not as great as that at the primary and secondary levels of education. Also, a recent study by Nie and Hillygus has begun to challenge this conventional social scientific view. Their study of collegiate coursework suggests “that the type of curriculum studied – whether social science, business, science/engineering, or education – seems to directly affect education’s impact on political engagement (2001, 44). They found that while increasing credits in subjects like business, the sciences and engineering had a negative effect on likelihood of political participation, increased humanities or education credits appeared to have no real effect. The only subject where increased credit hours had a positive and *strong* effect on political engagement was increased credits on the social sciences (2001, 45–47).

While this does not definitively show that increasing the number of collegiate civics courses taken can increase civic literacy as their work is about political engagement and not political knowledge, Nie and Hillygus give one good reason to suspect this may be the case. Still, their work reflects that fact that underlying the civic literacy projects of APSA and organizations like ISI is the assumption that civic literacy is a *positive* public good and that better informed citizens will result in a *more* democratic politics with *greater* popular participation. However, one should be cautious that a more informed citizenry is in all ways desirable. For one, Zaller argues high levels of political information do not necessarily translate into a more sagacious citizenry. Rather, it can produce political polarization, as high information voters may seek information sources consistent with their preconceptions and ignore information inconsistent with their ideological and partisan perspectives. Sunstein’s *Republic.com* further substantiates this concern that public consumption of politics is moving in this direction (2002). In short, it is possible that a more informed citizenry may just mean a more contentious and partisan politics in America.



If Zaller and Sunstein are correct, one can envision two possibilities. On the one hand, there may be greater political participation as a result of increased political literacy, but American politics would become more partisan and contentious than ever. On the other hand, as many assume the current contentious nature of partisan politics is a key source of public apathy, a more politically literate citizenry may just be further turned off by politics. Either conclusion points to the importance of how civic courses are taught. The teaching of civics through non-partisan mediums may be even more important for civic education than previously believed. The teacher/student relationship in the classroom at the collegiate level allows for the presentation of civic information from an ostensibly objective social scientific viewpoint and thus should be relatively less fettered by the perceptual screening that plagues reception of information from partisan sources conveyed through media.

### **Researching Civic Literacy in Arkansas**

This research, following the lead of the national ISI studies, contributes to our understanding and knowledge in one aspect of civic efficacy: civic education. We develop both an operational definition of civic literacy and an instrument to assess civic literacy in students that was employed at Arkansas colleges and universities. Through this research we hope to establish a baseline for Arkansan civic literacy that will allow for comparisons to national and regional averages. Furthermore, given a semi-annual data collection, we will be able to assess longitudinal changes in civic literacy. This permits an assessment of trends in civic literacy among these distinct publics as well as provides a benchmark useful to policy-makers interested in improving the civic literacy of Arkansas students. And finally, through a test-retest implementation of the survey instrument, we gauge the extent to which civic education can influence and improve civic literacy and citizen activism.

### **Modeling the Dimensions of Civic Efficacy and the Effect on Political Participation**

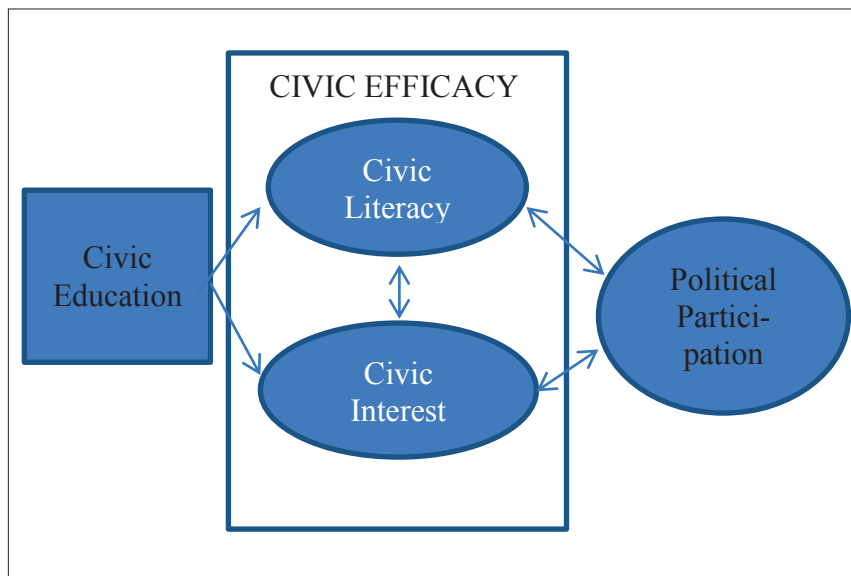
The two primary behavioral dimensions of civic participation identified in the literature are civic knowledge and civic interest (Carter and Elshtain 1997; Galston 2004; Milner 2002; Schachter 1998). Delli Carpini and Keeter define political knowledge as “the range of factual information about politics that is stored in long-term memory” in order to distinguish political knowledge from other types of knowledge and this definition provides the framework for our own analysis of civic education (Delli Carpini and Keeter



1996). Political knowledge is the primary resource determining the capacity of citizens to participate in politics. Without knowledge of candidates, political issues, party positions, and political events and trends, citizens cannot distinguish among those running for office nor hold officeholders accountable for their actions in office.

One criticism of attempts to measure political knowledge commonly cited in the literature is that there is no uniform set of facts necessary for citizenship. Also as Delli Carpini and Keeter note, the efficacy of political knowledge is context-dependent. Some facts may be useful in certain situations while useless in others (Delli Carpini and Keeter 1996). Given this we employ a measure of political knowledge that is broad-based, representative, and developed from the information the U.S. government deems relevant to citizenship in naturalization. Furthermore we do not assume any particular fact is more or less important. Rather, like Delli Carpini and Keeter, we take a quantity-based approach that treats knowledge relatively—more information is better than less information (Delli Carpini and Keeter 1996).

**Figure 1. An Endogenous Model of Civic Education, Civic Efficacy, and Political Participation**



Civic interest is an affective dimension which encapsulates the prioritization of politics in relation to other potential pursuits and the extent



to which a citizen desires to engage in the civic life. While they are distinct conceptually, clearly civic interest interacts with civic knowledge with respect to civic participation.

The endogeneity of these concepts has been noted in previous works and should be readily apparent, as the model of the relationships between civic education, civic efficacy, and political participation in Figure 1 illustrates (Milner 2002; Putnam 1995). Apathetic citizens are typically not motivated to learn or participate in politics. And lack of political knowledge may lead citizens to avoid and deprioritize political participation. On the flip side, political activity can yield increased interest in politics and a better understanding of the political process along with a larger knowledge base on politics just as much as improvements in civic literacy or the instilment of passion for politics in citizens can motivate political participation. The simultaneity of civic literacy, civic interest, and political participation suggests that civic educators have both multiple points of entry to improve civic efficacy and political participation and that improvements in one area may lead to improvements in other areas of civic involvement (Galston 2004).

#### *Data, Measures, and the Citizenship Exam*

Data was collected in Arkansas Tech University courses on American government in the fall and spring semesters from 2008–2010 and the spring semester of 2011. A test-retest procedure was introduced in the fall semester of 2010 and the spring semester of 2011 data collections. In those semesters, the citizenship exam was administered at the beginning of the semester as a diagnostic test and then again at the end of the semester after the students had completed the course. Unique identifiers were assigned to students in order to match pretests with posttests. For the pretest and posttest comparisons, students who did not complete the exam in either implementation were dropped from the sample. At the time of this analysis, the posttest for spring 2011 has not yet been administered. Thus pretest and posttest comparisons are only available for the fall semester of 2010.

This study focuses on civic literacy and the impact that civic education has on civic literacy. *Relative civic literacy* is conceptually defined as the political information knowledge base an individual citizen has to draw from relative to that of the average citizen. *Absolute civic literacy* is defined as the political information knowledge base minimally necessary to participate in politics. Relative civic literacy can be calculated and compared to group, state, and national averages. In order to measure absolute civic literacy, a



benchmark must be selected for comparison purposes. Since it is true we would expect civic literacy to vary between countries and to vary over time (as societies and governments become more complex), a selected benchmark needs to connote face validity while at the same time being broadly applicable in an assortment of comparisons. We use two measures of absolute civic literacy. Borrowing from the logic employed in the ISI studies, we use a 'grade' based standard where the baseline for civic literacy is a "C" average or 70% or better correct responses on the citizenship exam. The second measure of absolute civic literacy uses as its baseline the standard used by the United States government to grade citizenship on the USCIS (United States Citizenship and Immigration Service) Naturalization Test for individuals applying to become citizens of the United States.<sup>9</sup>

Applicants must get six out of the 10 randomly selected citizenship questions right in order to pass, for a 60% correct standard. The instrument we developed for this project drew 25 randomly selected questions from the 100 question U.S. Naturalization Test. We grouped these items into four conceptual areas of American citizenship and included one item on pop culture for comparison (see Table 1):

1. American political heritage—questions covering basic American political symbols and facts such as how many stripes are on the American flag and how many states are in the Union.
2. Current politics—questions on topical political information such as who the president is and who the mayor of their town is.
3. Government structure—questions on the institutions and processes of American politics such as who elects the president and what institution is responsible for law-making.
4. Constitution—questions that specifically touch on the Constitution and its provisions such as the Bill of Rights and what we call changes to the Constitution.

As Table 1 shows, the citizenship exam is weighted most heavily towards current politics (33%), with a number of questions that ask students

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<sup>9</sup> Applicants filing out Form N-400 to become naturalized citizens must complete an interview with the USCIS where their English skills and knowledge of civics are tested, per the Section 312 requirement under the Immigration and Naturalization Act of 1952 that naturalized citizens possess "a knowledge and understanding of the fundamentals of the history, and of the principles and form of government, of the United States" (8 U.S.C. 1423). They are required to get 6 out of 10 civics questions correct in order to pass. The USCIS draws these questions from a list of 100 questions which they publish as the "Guide to Naturalization," available at the USCIS website.



to answer who their current representatives are at the local, state, and federal levels. This over-representation was intentional, as it is information that has the most practical utility for active citizen participation in politics. It is difficult to hold representatives accountable if you do not know who they are. Of less utility to citizens exercising their basic democratic rights is the historical information about the symbolism in the U.S. flag and who the rebellious American colonies fought against in the Revolutionary war.

**Table 1. Frequencies of Items in Citizenship Test for the Civic Literacy Categories**

Categories	Frequency	Percentage
American Political Heritage	4	14.81%
Current Politics	9	33.33%
Government Structure	7	25.93%
Constitution	6	22.22%
Pop Culture	1	0.04%
Total	27	100.00%

While this information is an important point of the foundational knowledge base for an active citizen and is undoubtedly correlated with desire and capacity to participate, it is of the least practical use to citizens of the four categories. Hence fewer questions in this category were included in the instrument. There were a relatively equal number of questions on government structure and the Constitution. Both categories are of equal import, we believe, in terms of utility for active citizens and indicators of civic knowledge and interest in politics. Furthermore, these two categories contain items that are most often a point of focus in American Government courses and introductory courses to American politics. Consequently we included a relatively equal number of these items in the instrument and, together, constitute about half of the citizenship exam.

Demographic data on the respondents was collected in each of the citizenship exam implementations. The demographic questions used in every implementation of the exam are U.S. citizenship, race and age. Additional demographic questions on gender, income, home state, and high-school the student graduated from were added to the instrument as of the fall 2010 semester. Two-question branching items were also added as of fall 2010 in order to develop seven-point scales of partisanship and political ideology for the respondents to the exam.



### Sample Characteristics: Diagnostic Sample and Pretest-Posttest Test Sample

We use two samples to assess civic literacy in ATU students over the survey period, as was mentioned earlier. The first sample, which we call the diagnostic sample, consists of all data collections where the citizenship survey was given at the beginning of the semester only and of the pretest administrations of the citizenship survey from the semester where the instrument was administered at the beginning (pretest) and at the end of the semester (posttest). Collected since the spring of 2008, this sample consists of 948 ATU students. Select demographics for this sample are reported in Table 2. Data on the age, citizenship, and race of the respondents was collected in every data collection, however income, party identification, ideology, and gender were only added recently, accounting for the radically different n's for those respondent characteristics.

**Table 2. Select Demographic Variables–Full Diagnostic Sample**

Characteristic	N	Mean	Standard Deviation	Min	Max
Full Sample	948	—	—	—	—
Citizenship	947	0.996	0.138	0	1
Age	927	20.41	4.814	17	64
Male	174	0.425	0.496	0	1
White	943	0.874	0.332	0	1
Income	193	3.176	1.658	1	6
Party ID	134	5.067	2.184	1	7
Ideology	144	4.896	1.946	1	7

The demographic data from the diagnostic sample is consistent with that of the ATU student body. While ATU has added an additional 2399 students over the course of the data collection period for a current student population of 9815, the relative breakdown of students into gender, racial, and age categories has not changed significantly over this period (Watson 2010). For example, Whites were 84.55% of the ATU student body in 2007 and they were 83.48% as of 2010 (Watson 2010). Note, that is only slightly less than the percentage of Whites in the diagnostic sample.

Unsurprisingly, the demographics are consistent with expectations for a student body drawn largely from the rural and small-to-moderate cities of



central Arkansas. Citizenship is near-universal, with the students reporting U.S. citizenship over 99%. Just below 90% of the respondents identify as White, which is significantly above the state population figure (80.6%) but consistent with the Pope County population racial demographics (92%).<sup>10</sup> The median household income for Pope County is \$46,224, a figure that matches up with the average respondent's reported income category (\$40,001–\$60,000) in the diagnostic sample. The average age of respondents in the sample is 20.41 years of age, which is in line with expectations for a sophomore-level college course. While the age of respondents ranges from 17–64, the bulk of the sample falls between the ages of 18 and 22 years of age. On a seven-point ideological scale with seven indicating "strongly conservative," respondents average just over five in the diagnostic sample. Given that a sizeable plurality of ATU students hails from Pope County, the conservative ideological bent of the sample was expected.

More surprising was the average party identification of the diagnostic sample. On a seven-point scale of partisanship with a seven indicating "strongly Republican," the average ATU student was above a five on this scale. In a state that has been dominated by the Democratic Party for generations, this is an interesting outcome even considering the traditional Republican-tilt of Pope County. Also there is an over-representation of women in the sample. While men are 49.3% of the Pope County population, 48% of full-time undergraduates, and 46.5% all ATU students as of fall 2010, they constitute only 42.5% of the diagnostic sample. While this probably just reflects the trend of overrepresentation of women in higher education over the last few decades, this is still a modest difference and is unlikely to significantly impact the statistical trends and parameter estimates inferred from the sample.

The pre-post sample frequencies for select demographic variables are reported in Table 3. The pre-post sample consists of one semester's data collection: fall 2010. Only students who took both the pretest and the posttest are included in the sample, thus mitigating the mortality threat presented by the significant number of student drops from the course.<sup>11</sup> There are 148 student respondents who completed the citizenship exam in both the pretest and posttest periods in the sample. The sample means for the pre-post

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<sup>10</sup> Arkansas and Pope County demographics reported from the U.S. Census Bureau's 2005–2009 American Community Survey 5-year estimates available at: <http://factfinder.census.gov/>.

<sup>11</sup> With just 152 out of the 403 students from the fall 2010 semester who took the posttest, the attrition rate in the American Government courses that semester was 37.71%, a rate that is typical for this course in most semesters.



sample are, within a couple percentage points, consistent with those reported for the full diagnostic sample. Table 3 shows that the sample demographics for the pretest sample are relatively equivalent to the characteristics of the posttest sample. The only differences that are not within a percentage point are found in the gender and party identification variables. The posttest sample has a larger number of men than the pretest sample by about 3.5 percentage points. Also, the posttest sample is about seven points more Republican. Both could easily be the result of random variation in the characteristics of students that dropped the sections of the American Government course or were not in attendance for the posttest administration. Speculation on such relatively small differences with only one semester's worth of pretests and posttests is unwarranted.

I. **Table 3. Pre-Post Sample Frequencies–Demographics**

Characteristic	Pretest Sample		Posttest	
	(%)	Pretest N	Sample (%)	Posttest N
Full Sample	—	403	—	200
Citizenship	99.01	403	98.48	198
AR Resident	98.51	201	94.04	151
Age: 17–21	82.99	394	81.03	195
Male	42.53	174	46.08	102
White	89.53	401	88.83	197
Income: 40k+	59.59	193	61.22	147
Republican	68.66	134	75.56	90
Conservative	61.81	144	59.69	129

Both the diagnostic and pre-post samples consist of students who took American Government at Arkansas Tech University between the spring semester of 2008 and the spring semester of 2011, with the pre-post sample consisting of the most recent complete semester in that period of time. While these are convenience samples and hence non-random, there are reasons to believe the representativeness of these samples extends beyond that of the classes in which they were conducted. As already mentioned, the sample demographics, outside of age and party identification, are relatively similar to the county and state population demographics as reported by the U.S. Census Bureau. Furthermore, as a general education requirement at ATU, these courses contain a cross-section of ATU majors, though there are likely a



larger percentage of Arts and Humanities majors with respect to the school population. Finally, the average citizenship score is remarkably consistent across all seven semesters of the diagnostic sample data collection, ranging from a low of 37.6% to a high of 45.3%, as is evident in the semester time-series in Figure 11. While these average scores are lower than those found in national studies, such as that conducted by ISI, this could be a consequence of difference in instrument methodology. While ISI and many civics-based surveys employ multiple choice questions, our instrument uses fill-in-the-blank questions. This raises the bar for correct answers on our instrument vis-à-vis multiple choice based instruments.

That said, this is a non-random sample and the appropriate level of caution in using these results to make inferences about larger populations should be exercised. We believe that this sample speaks best to the population of college students in central Arkansas and have similar research at other Arkansas universities that supports this position. We will discuss this in more detail later in the paper when we discuss the findings of our research.

### **Findings: Diagnostic Sample**

The disturbing state of civic literacy is immediately apparent from the breakdown of citizenship scores from the diagnostic sample illustrated in Figure 2. The primary measure of civic literacy we employ in this study is the average responses by students on the 25 substantive citizenship questions derived from the bank of naturalization questions used by the United States to judge applicants for citizenship. The standard for passing used by the United States is 60% correct of the administered test, which for naturalization consists of 10 questions. While we use 2.5 times more questions than the U.S. naturalization test, the 60% standard is employed as a valid and reliable measure of civic literacy. As is evident from the distribution of scores reported in Figure 2, 86.5% of the students who took the citizenship test at the beginning of the semester failed to meet the 60% naturalization standard. The news is even worse if we use the higher “C” average standard of 70%, as 96% of the respondents failed to meet or exceed that standard on the citizenship test. Over 8 out of 10 students who took the citizenship exam would have failed their naturalization test and thus failed to meet the requirements for naturalized citizenship. While well over 9 out of 10 students graded out at failing grades (D or F) on citizenship in the diagnostic sample. The failure of students from the Natural State to meet basic civics standards set for naturalization, let alone earn passing grades, is a grim tale of the state of civic education in Arkansas.



**Figure 2. Distribution of Scores on Naturalization-Based Citizenship Test, Full Diagnostic Sample**

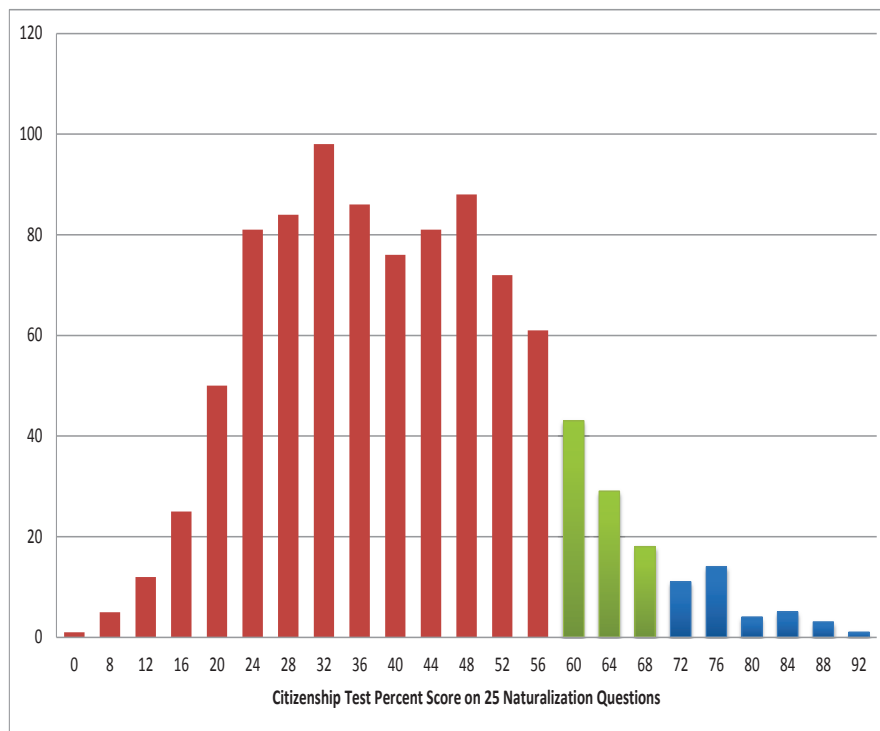


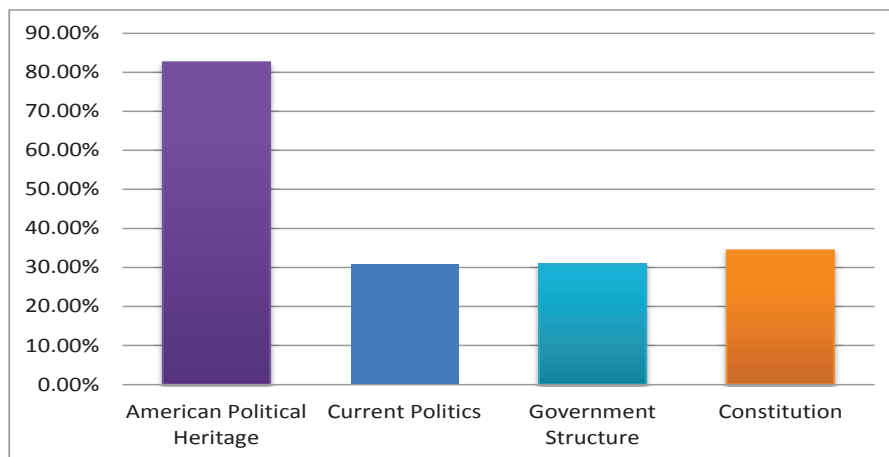
Figure 3 breaks down the citizenship score by the aforementioned categories of citizenship: American political heritage, current politics, government structure, and the Constitution. There is some good news in this cut of the data, as students in the sample scored above 80% in the American political heritage category. However, recall that this is the category that was deemed least useful for active citizens. While an active citizen likely has information on American political heritage in his or her knowledge base, it does not provide a greater understanding of how the American political system is set up under the Constitution and the key mechanism for fundamental change in our system (constitutional amendment), thus facilitating political participation. It isn't informative as to the structure of the American political system, which might be useful in determining access points for participatory activities or crafting grassroots appeals to officials and politicians. Nor would it be helpful in identifying the officials at the local, state, and federal levels of government. Hence the category of



citizenship the students perform the best in is the category of citizenship of least utility to the active citizen.

In fact, within the APH category there are two questions on symbolism in the U.S. flag. The high scores on these two questions (the stars represented the states and the stripes represented the original 13 colonies) may simply be reflective of American patriotism and not historical knowledge, *per se*. Concern that the category of APH is more about patriotism than historical knowledge is reinforced by the fact that the question on who was the colonial adversary in the Revolutionary War—a more substantive question on American political history—scored significantly below that of the other measures of APH.

**Figure 3. Percent Correct American Civic Literacy Categories, Full Diagnostic Sample**



In the categories of citizenship with greater utility, the performance of the respondents to the citizenship exam is very poor. In the current politics and government structure categories, those of greatest utility in participatory politics, students averaged around 30% correct (Figure 3). They did marginally better in the Constitution category, scoring a little less than 35% correct. The average in all three categories is half that necessary to pass the naturalization test. Students would need a 100% improvement in the current politics and government structure categories to meet the naturalization standard. That score would still be a “D” on the traditional grading scale, 10% below the “C” standard we set as our second measure of civic literacy.



Sorted by the four conceptual categories of civic literacy, the percent correct for each item on the citizenship test is illustrated in Figure 4. As was apparent in the categorical analysis, students performed well on the items that cover basic American political heritage. However, the two highest scoring items were those that asked the students to identify the current president and what is the minimum voting age respectively. 95% of the respondents gave the correct answer on these items. While these items are classified in the more useful categories of current politics and the Constitution, as individual pieces of information these are of dubious utility. Knowing the name of the president indicates some penetration of political information in the knowledge base of students, but the most useful information with respect to public officials for an active citizen will be at the local and state levels where they can have the most influence. Contrast the presidential score with those for the current senators (11%) and representatives (5%)—i.e. the contacts closest and most responsive to the active citizen—and their prospects for effective political participation are particularly grim. The percentage of students who could identify their local mayor (40%) or the governor (51%) is much higher but of little comfort. If half the students do not know the name of the governor, and 60% cannot identify their own mayor, how can we expect them to effectively participate as active citizens at any level?

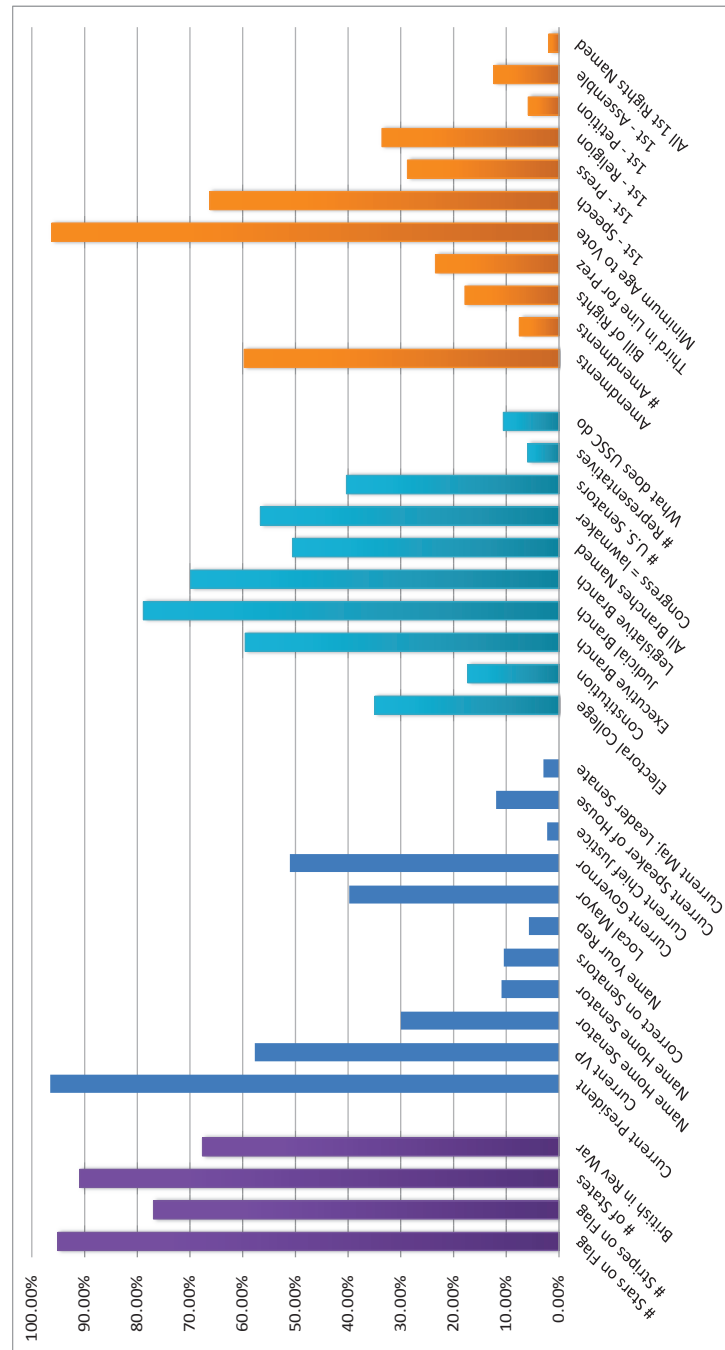
Figure 4 shows that about half of the students who took the citizenship exam have a basic understanding of the structure and function of the federal government, except for the Supreme Court. However, knowledge of the Constitution and basic information about the Bill of Rights is severely lacking. Outside of the First Amendment right to free speech, less than 30% of the students exhibited knowledge of the content and nature of the Constitution. Students are mostly unaware of the number of amendments to the Constitution, that the Constitution is the supreme law of the land, or what the Bill of Rights is.<sup>12</sup> On a positive note, 60% of students were able to identify “amendments” as the method for changing the Constitution.

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<sup>12</sup> We should note that the constitution question is problematic in that it is open to a number of defensible interpretations that may not lead to identifying the constitution as the “supreme law of the land,” which is the answer identified by the USCIS. A better question on the constitution will be used on later instruments.



**Figure 4. Percentage of Correct Responses to Naturalization-Based Citizenship Test, Full Diagnostic Sample**





In order to assess potential determinants of civic literacy, a regression of demographic and political factors on citizenship scores for the full diagnostic sample is reported in Table 4. Before discussing the statistical results, an important caveat should be observed. Several of the demographic variables are near-constants and thus the standard errors of their parameter estimates may be unreliable. I exclude citizenship from all of the models for its lack of variability and, while race is statistically significant in all of the models where it is included, the fact that over 90% of the sample is White suggests due caution in relying on the race estimates. The results could be a spurious consequence of unaccounted for personal characteristics of the relatively small number of non-White respondents rather than race.

**Table 4. Multiple Regression of Demographic and Political Factors on Naturalization Score**

Factors	Model 1 Demographic Model	Model 2 Political Model	Model 3 Full Model
Intercept	24.483*** (3.878)	33.079** (4.569)	20.658** (6.267)
White	14.033*** (3.917)		22.806** (6.085)
Male	9.115*** (2.076)		4.140 (2.813)
Income	-0.781 (0.634)		-1.897* (1.825)
Party ID		-0.256 (0.946)	-1.601 (0.855)
Ideology		2.007** (0.946)	2.387** (0.855)
N	165	94	77
R <sup>2</sup>	.176	.061	.242

Model 1 assesses the linear relationship between the demographic characteristics of the students and their scores on the citizenship test (Table 4). None of the models are particularly good fits to the data. The full model (Model 3) is only about a 25% improvement over the mean. This is likely a consequence of the relative lack of political and demographic diversity in the sample. Still, significant effects for both political and demographic factors are apparent. In the demographic model, race and gender are significant influences on civic literacy. However, when ideology and partisanship are



accounted for (Model 3), gender drops out as a significant predictor of civic literacy. Gender accounts for a 9% increase in citizenship score in Model 1, and while the coefficient remains positive in the full model, it is not statistically significant ( $\alpha=.05$ ). In Model 2, which assesses the political predictors of civic literacy alone, ideology is significant while party identification is not. For every single unit increase in ideology, there was a 2% improvement in the citizenship score.

Income and party identification were insignificant predictors in the civic literacy models that estimated demographic and political factors separately; however both are significant predictors in the full model. Interestingly, income has a negative coefficient in the full model (-1.897), meaning that those students who reported lower incomes scored better on their citizenship exams on average than those with higher family incomes. While this is inconsistent with conventional wisdom on the relationship between income and education, it is important to remember the restricted range within which income varies among students at ATU. Income brackets at the national or even the state level are not represented proportionately in the ATU student body. Consequently, this trend may be a statistical artifact rather than a substantive result. Also of interest is the fact that party identification and ideology have opposite effects on civic literacy. Overall, the portion of the diagnostic sample where party identification was collected contains 20.1% self-identified Democrats, 46.73% self-identified Republicans and 33.17% self-identified Independents. Interestingly, while more conservative students performed better on the exam ( $\beta=2.387$ ), higher civic literacy was correlated with being more Democratic in the full model. This might be a consequence of the slow pace of Southern party realignment in Arkansas. The Republican Party remains weak and unorganized in the state and may thus not be as effective an institution at educating their partisans as the Democratic Party is, though such a theory is highly speculative.

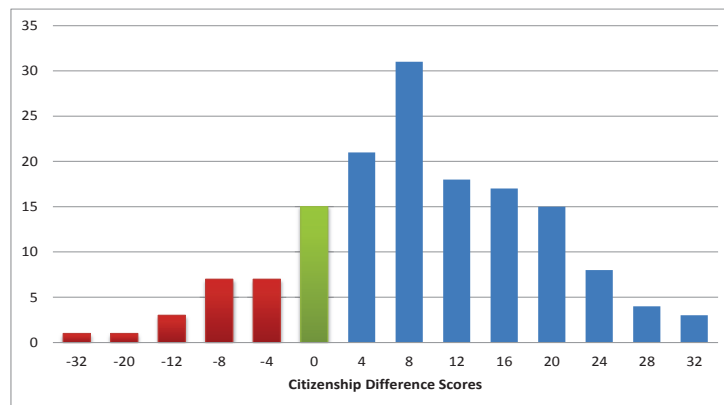
### **Findings: Pretest-Posttest Test Sample**

As noted earlier, the pre-posttest sample is reported exclusively for the fall semester of 2010. The pretest was administered in the first weeks of the semester while the posttest was given at the end of the semester or during the finals period. While some of the differences could be a consequence of maturation, the most likely explanation for any differences in scores (particularly improvements) is the 'treatment' the students underwent in the intervening period is the civic education they received in the respective American Government courses taught by Drs. Rogers, Gooch, and Housenick in the fall of 2010. While none of the professors taught specifically



to the test, much of the material from the naturalization test is covered as a matter of course in the American Government classes taught at ATU. The difference between the pretest and posttest citizenship scores is illustrated in Figure 5. The significant effect of one semester's worth of civic education is quite apparent. Over 72% of the students exhibited improvement in their civic literacy from the pretest to the posttest on citizenship. Very few students did worse on the exam (13%), while 15% had identical citizenship scores on the pretest and the posttest. Nearly half of the students (42.5%) improved their civic literacy by 10% or more (Figure 5). As a result of taking the course in American Government at ATU in the fall of 2010, students on average improved their civic literacy score on the naturalization test by 8.93 points (Table 5). Though we do not test civic literacy in further courses, a course on, for example, state and local government could be expected to further improve the civic literacy of students.

**Figure 5. Distribution of Citizenship Difference Scores, Pretest/Posttest Test Sample**



**Table 5. Simple Regression of Pre/Post Dummy on Citizenship Score**

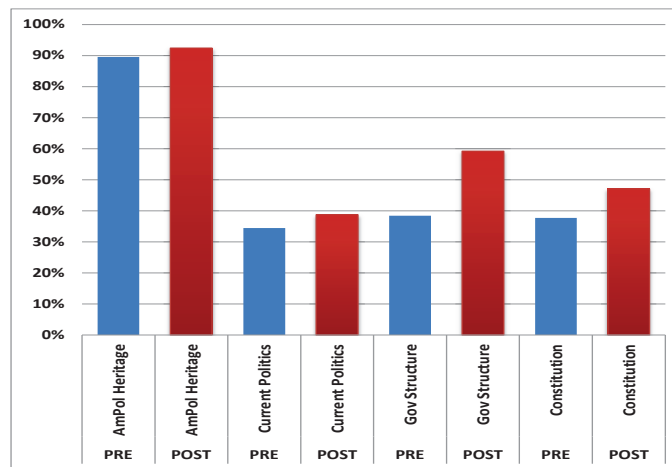
Model:		Parameter Estimate		
cit= $b_0 + b_1(\text{pre/post}) + e$		Intercept (S.E.)	(S.E.)	R <sup>2</sup> N
Pre/Post Dummy		47.762 (1.290)	8.927** (1.825)	.074 303

Figure 6 reports the breakdown of citizenship scores between the pretest and the posttest for the four categories of civic literacy. Little improvement was evidenced on American political heritage. This is unsurprising for two



reasons: the civic education provided in American Government courses gives little to no attention to basic facts such as the number of stars on the flag, and the strong showing on American political heritage by students in the pretest left little room for improvement on the posttest. There was only modest improvement in the current politics category, again likely due to the fact that the identity of current politicians is not necessarily a component of an American Government course and the degree to which the identity of current officeholders is emphasized can significantly vary.

**Figure 6. Percent Correct American Civic Literacy Categories, Pretest/Posttest Test Sample**

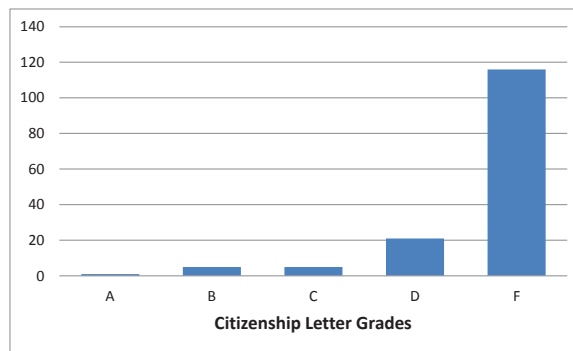


While some improvement occurred across all four categories, the most significant improvement was in the government structure category. There was over a 20% improvement in the accuracy of respondent answers to the government structure questions on the citizenship test. The improvement on questions related to the Constitution was also impressive, with over a 10% improvement from pretest to posttest. Civic education on government structure and the Constitution is a strong emphasis in introductory courses in American politics and American government and the course offerings at ATU are no exception. Figure 7 and Figure 8 show the improvement in civic literacy using the letter grade standard. While there wasn't much improvement in the highest grade level ("A"), there was marked improvement the "B," "C," and especially the "D," category. The number of students who scored a "B" or a "D" doubled from the pretest to the posttest, while the number of students who earned a "C" nearly tripled in the posttest administration. The stark contrast between the pretest and posttest

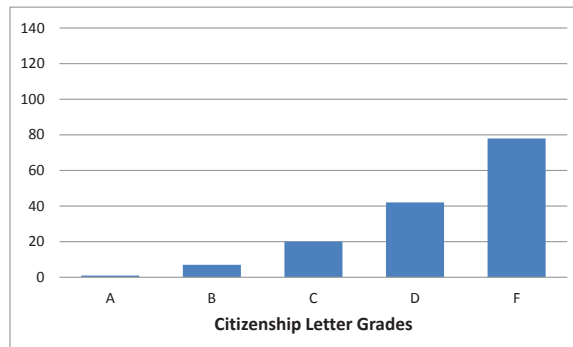


citizenship scores is evident in a comparison of Figure 9 and Figure 10, showing those who passed the naturalization standard versus those who failed it. While almost 80% of the students failed the pretest ("fail"), that percentage declines to about 52% in the posttest, a 30% improvement in the pass-rate. The ANOVA result reported in Table 5 confirms the effects civic education had on civic literacy apparent in the univariate comparisons. There was an average 8.9% improvement on the citizenship score from the pretest to the posttest (8.92 points).

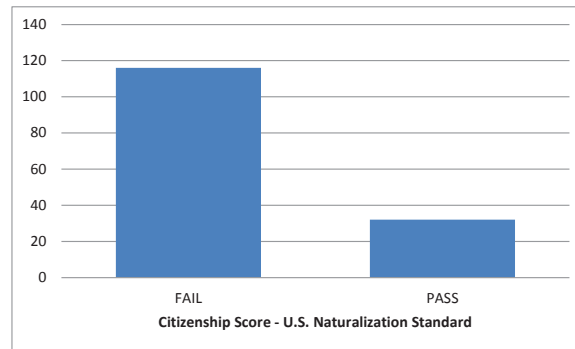
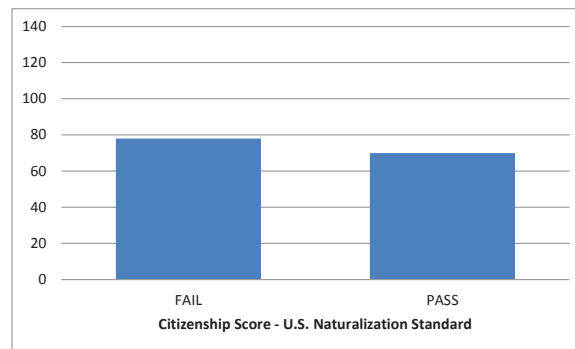
**Figure 7. Pretest Civic Literacy Letter Grade Frequencies**



**Figure 8. Posttest Civic Literacy Letter Grade Frequencies**





**Figure 9. Pretest Civic Literacy Naturalization Bar Frequencies****Figure 10. Posttest Civic Literacy Naturalization Bar Frequencies**

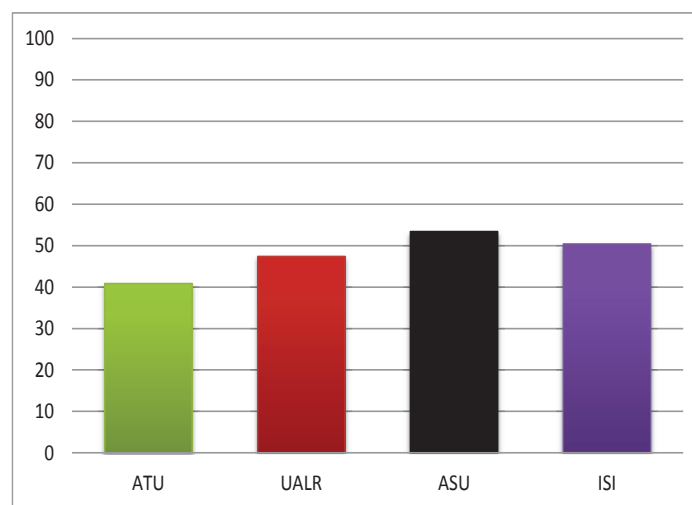
### **Comparison of Findings with other National and State Data on Civic Literacy**

This project on civic literacy has not occurred in a vacuum. As noted earlier, national studies have been undertaken to gauge the civic literacy in the country as a whole. Furthermore, a number of companion projects on civic literacy have been implemented at other institutions of higher learning in the state of Arkansas. While these universities have distinctly different student populations and employed different instruments and measures of civic literacy, they found remarkably similar levels of civic literacy to what we found in this study (Figure 11). This further strengthens the validity of the findings reported here with respect to civic literacy at Arkansas Tech University. The findings from the University of Arkansas-Little Rock (UALR) and Arkansas State University (ASU) in Jonesboro reaffirm the poor civic literacy of the average Arkansas collegiate. UALR conducted a pretest



and posttest cognitive assessment for its American National Government students using a quasi-experimental research design similar to that used in this project for the fall 2010 semester. They collected data from the 1999–2000 academic years to the 2004–2005 academic year.

**Figure 11. Civic Literacy Score Mean Comparison, State and National Data**



While UALR used a different cognitive exam that was composed of 46 questions and their *N*s are much smaller (158 students for the pretest and 143 students for the posttest), their findings are surprisingly similar to the results at ATU. For example, the cumulative average of UALR students over the time period was a 48% or failing grade for the pretest, while upon completion of the course the posttest average was a passing grade of 66%. ATU American Government students, in comparison, averaged the same grade on the pretest (48%) while improving to an average of 57% on the civic literacy test in the posttest phase.

Providing a second benchmark for comparison, there was a similar cognitive assessment done at ASU-Jonesboro in the fall 2008 semester. Their assessment used the same pool of open-ended naturalization questions that we used for our civic literacy project, but they used an instrument with 50 questions and only gave a pretest at the beginning of the semester for six sections of the Introduction to American Government course at ASU-Jonesboro. In total, 206 students took the exam and 60% failed it. The average score of 53% for ASU-Jonesboro students was higher on average than ATU



or UALR. Unfortunately, we are unable to assess if this higher average is an outlier semester for ASU-Jonesboro given it was a one-shot study, however it is well within range of the other state civic literacy findings. Thus, three of the larger universities in the state of Arkansas consistently find that the bulk of students are unable to pass a citizenship exam without at least one course in American government. Although our research reported here is based exclusively on ATU data, we think the consistency of findings at other universities indicates that we are tapping into a state-wide phenomenon.<sup>13</sup>

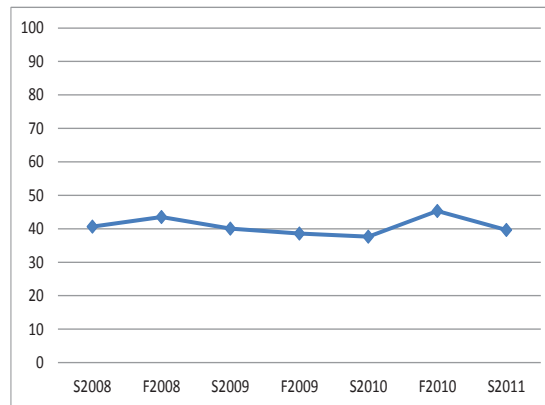
## **Conclusion**

As we noted in the introduction to this study, the link between civic education and civic literacy is a significant and important factor in political participation. While the relationship between civic literacy and political participation is beyond the scope of this article, the recursive relationship between civic literacy, civic education, and political participation has been demonstrated in other work (Galston 2004). We suspect those citizens who lack civic efficacy, even if they desire to participate, may find the barriers to that participation created by their ignorance of government structure and political processes too daunting to overcome. Likewise, those who have been educated on basic civics and thus have the tools for political participation may discover an interest in politics and a desire to participate. Anecdotally, we have noted a number of students express future plans to be more politically involved in student evaluations, e-mails, and testimonials. What we do show is the great deal of work necessary to provide the average college student with those tools. Our findings at ATU (and the more limited data that has been shared with us from UALR and ASU-Jonesboro) suggest a severe paucity of civic literacy in the student populations at higher-level educational institutions in Arkansas. Though our research was conducted at ATU, we do not believe it to be atypical of Arkansas collegiate students, as a comparison of the results from across the state in Figure \_\_\_\_ illustrates. This deficiency is robust across the seven semesters of diagnostic sample data collection (Figure 12) and suggests that Arkansas faces a crisis of civic literacy that, if unaddressed, will continue to limit the ability of citizens to engage their representatives and contribute to the policy process at the local, state, and federal levels of government.

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<sup>13</sup> We would like to thank Ann Clemmer (UALR), Patrick A. Stewart (University of Arkansas, Fayetteville) and Cameron Wimby (ASU, Jonesboro) for graciously permitting us to report the results of their civic literacy projects here.



**Figure 12. Citizenship Score by Semester**

It further shows the importance of civic education as a mechanism for improving civic literacy and, with that, the capacity for active citizenship in the populace. The conventional wisdom derived from the ISI studies is that civic education itself fails to improve civic literacy. Rather, it is the quantity of general education that is key to improving civic literacy. Our research suggests otherwise. We show that one course in American government can improve civic literacy amongst students and, therefore, a more robust civics curriculum at the collegiate level could have a significant impact on the level of civic knowledge of citizens. Though the pre-posttest results reported here are from only one semester, the marked improvement demonstrated by students who completed the course in American Government at ATU is highly suggestive that civic education is a valid remedy for civic ignorance and provides a path to active citizenship. The categorical breakdown of civic literacy suggests that little attention is needed to basic facts of American political heritage, and that instruction in American government is well suited to providing students with a better understanding of American governmental structure and the U.S. Constitution. However, the results also suggest greater attention to current politics, such as current representatives of leaders, may need to become more of a point of emphasis in introductory courses in American politics in order to provide students with the full gamut of tools necessary for active citizenship.

It is our hope that this study and future studies of civic literacy, civic efficacy, and civic education in Arkansas will help to inform policymakers of



the necessity of civic education in institutions of higher-learning and the need for greater attention to civic education in the college curriculum. Certainly the link between civic education and political engagement should be explored. Do students armed with the tools of civic education become more active in politics? This is an important question for consideration. Furthermore, the need to demonstrate these results across college campuses in Arkansas and beyond, in longitudinal and cross-sectional analysis, suggests a clear avenue for future research. Through an expansion of our own data collection, improvements to the instrument testing civic literacy, and the inclusion of data collections from other campuses in Arkansas we plan to demonstrate the robustness of these findings. They should prove a clarion call to educators and policymakers to make a priority of civic education in Arkansas.



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