

Participation of International African Students at the University of Arkansas in Extracurricular Activities and Their Academic Outcomes

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ABSTRACT

This paper examines whether there is an association between participation of the international African students at the University of Arkansas in extracurricular activities (ECAs) and their grade point average (GPA). With the increase of study abroad programs, numerous Africans at college age travel to the US to pursue their degrees. A considerable number of them get involved in extra-scholastic activities, whereas others are more concentrated on their academic programs. The researcher wanted to find whether there was a difference in GPA between those African students who were more involved in extracurricular activities and their counterparts who were least involved. Although the t-test's results were insignificant, the qualitative results of this study may be insightful for educators and advisors who deal with international students from Africa.

Keywords: Academic achievement, African students, extracurricular activities, GPA

INTRODUCTION

Today, almost every school at different levels has departments or offices that encourage their students to participate in extracurricular activities (ECAs). The apparent advantage of this involvement in ECAs might be the maximization of the socialization process among students and other members of the school community (University of Arkansas, 2018). However, there are other benefits which normally go unnoticed –the association between participation in ECAs and school success.

Numerous studies found that students who are most involved in ECAs academically perform better than their peers who are less involved. Fox, Barr-Anderson, Neumark-Sztainer, and Wall (2010) conducted a study that aimed at examining associations between participation in ECAs and academic achievements among middle and high students. These researchers concluded that independently of the type of ECAs, whether physical exercises or sports, participation in them was positively associated with academic achievement among students. Similarly, Moriana, J. A. et al. (2006) studied the impact of ECAs on scholastic outcomes of students in junior high schools in Spain. They found that students involved in ECAs had better school performance than their counterparts who did not participate.

These and other previous studies (Bradley & Conway, 2016; Covay & Carbonaro, 2010; Fox, Barr-Anderson, Neumark-Sztainer, & Wall, 2010; Moriana, J. A. et al. (2006) on this subject have focused on prior college education, namely kindergarten, elementary, middle, high, and secondary schools. None of these studies were conducted with college and international students. Therefore, this study will attempt to fill this gap — examine whether there is an association between participation of the international African students at the University of Arkansas in ECAs and their GPA. This study will also seek to answer the following questions:

Q1: Is there any difference in GPA between international African students at the University of Arkansas most involved in ECAs and their less involved peers?

Q2: Is there any difference in GPA between international African students at the University of Arkansas involved in sports ECAs and their peers involved in non-sports ECAs?

Q3: How do international African students at the University of Arkansas perceive their participation in ECAs?

Q4: Why do international African students at the University of Arkansas participate in ECAs?

Scope and Limitation

The results of this study might not reflect the whole international population at the University of Arkansas. Data and subsequent findings are specific to the participants of this study – international African students at the University of Arkansas, enrolled during the spring semester 2018. Results represent only the surveyed University of Arkansas international African students.

This study examined only the data from the electronic survey submitted from January 30th to February 28th, 2018. After this date, response receptions were terminated. Although the survey was sent to all African students on campus, with the aid of the International Students and Scholars (ISS) office at the University of Arkansas, only 37% of the responses were received on the due date. Therefore, the results might not reflect the total population of African students enrolled in the spring semester 2018.

The ISS office at the University of Arkansas did not disclose participants' emails to the researcher. Thus, it was impossible to send reminders to the participants of this study, regarding the need for responding to the survey and its subsequent submission within the schedule. Using the African Students Organization's (ASO) LISTSERV, the researcher sent a reminder to student members of the organization two weeks later, but international African students who were non-members were unreachable.

LITERATURE REVIEW

A considerable number of researchers found positive associations between ECAs and academic outcomes (AOs). Darling, Caldwell and Smith (2005, p. 51), Moriana et al. (2006), and Eccles, Barber, Stone and Hunt (2003), for example, studied the relationship between ECAs, academic performance and adolescent adjustment in secondary and high school students. These researchers found that students who were more involved in ECAs, including sports, had better GPAs/grades and had “more positive attitudes toward school, and higher academic aspirations” than their peers who had no or least participation in ECAs. Reviewing the literature on the positive effects of ECAs on students, Massoni (2011) reported that students who were more involved in after-school activities ameliorated their behavior, reduced the probability of dropout, were more likely to become successful adults, and more importantly they had better grades than their peers who were not involved in ECAs.

Analyzing the data from the National Education Longitudinal Study of 1988, sponsored by the US Department of Education, Lipscomb (2007) found that secondary school students' participation in athletics and clubs was associated with a three percent increase in science and math

scores. Analyzing the same data set, Broh (2002) found that involvement in school sports benefited students' academic achievement, including improvement in their formal math test scores. In Dumais' (2006) study with kindergarteners, first, second and third graders, she found participation in ECAs provided "gains in reading achievement test scores between first and third grade and third grade teachers' evaluations of mathematics skills, but does not affect gains in math achievement test scores or teachers' evaluations of language arts skills" (p. 177).

However, some investigators identified negative associations. Lipscomb (2007) affirmed that participation in ECAs may have undesirable AOs, if it sacrifices the time devoted to school work, such as assignment and homework completion, and test preparation. Lewis' (2004) study, for instance, found that students who participated in vocational activities and extracurricular employment had poorer academic performance than their classmates who were involved in other types of ECAs.

Some investigators remained skeptical, although they found satisfactory results. For example, Fox, Barr-Anderson, Neumark-Sztainer, and Wall (2010) studied the relationship between physical activities, sports team participation and AOs among secondary and high school students. In this study, they found that students who participated in sports teams had higher GPAs than the other students who did not participate. Notwithstanding their findings, these researchers questioned whether the positive AOs that they found were a result of the physical exercises involved in sports practices, or whether it was simply because of the requirement to maintain a certain GPA to be part of the sports teams.

Supporting Fox et al.'s (2010) skepticism, Shulruf (2010) examined more than 80 studies on the effect of ECAs on AOs. This scholar found reports of positive effects of ECAs on school achievements in these studies. However, he found more associations between ECAs and academic achievement rather than causation.

Several researchers affirmed that ECAs have a positive impact on AOs rather than GPA. Lipscomb (2007), for example, found that secondary school students' participation in ECAs was associated with "a 5 percent increase in Bachelor's degree attainment expectations" (p. 463). Feldman and Matjasko (2005) associated structured ECAs participation with "positive academic, behavioral, psychological, and young adult outcomes" (p.202). According to Bradley and Conway (2016), participation in ECAs develops students' non-cognitive skills — motivation, conscientiousness, openness-to-experience and increased self-efficacy — which in turn boosts the required academic achievement. Proposing the social capital model, Broh (2002) recognized that it aggregates immeasurable values to individuals through membership networks. In her assertions, social capital strengthens the bonds between

parents and students, students and their peers, teachers and students, acting as a channel of information dissemination and a communal control system. As a collective control mechanism, social capital enables families and school employees to maintain students in compliance with the school discipline, expectations, norms and values. Consequently, these social networks and the control system generate academic success.

RESEARCH METHOD

A combined quantitative and qualitative research design — embedded mixed methods research — was used for this study. According to Johnson and Onwuegbuzie (2004), a mixed research method design is used to include qualitative and quantitative procedures in a single research study. The advantage of using a mixed method is to triangulate data, and seek further clarification of results, which would not be found if only one method was used (Clark & Creswell, 2010; Johnson & Onwuegbuzie, 2004; Leech & Onwuegbuzie, 2006).

The participants for this study were the international African students at the University of Arkansas. A sample of 62 students was selected out of a total population of 165 international African students during the spring semester of 2018. The methodology for this study was a convenient sample of the participants. A convenient sample is “A nonprobabilistic sample selected from available elements” (Abbot, 2011, p. 169). According to Abbot (2011), this sampling method is commonly used “when the researcher has no opportunity to use random sampling methods” (p.169).

The participants were undergraduate or graduate (Master’s and Doctoral) students. Of the 62 participants, 31 were undergraduate students; eighteen were master’s students, and 13 were doctoral students. Thirty-seven of the participants in this study were male, and 25 were female. Participants came from five regions of Africa – Central, East, North, South, and West — with Western Africa being the region of origin to the most participants, and Southern Africa being the region of origin to the fewest participants. Table 1 shows the descriptive statistics of the participants in this study.

Table 1. Descriptive Statistics of the participants

Demographic		<i>n</i>	%
Gender	Male	37	59.7
	Female	25	40.3
Region	Central Africa	13	21
	East Africa	14	22.6
	North Africa	10	16.1

	Southern Africa	6	9.7
	West Africa	19	30.6
College			
Level	Doctorate	13	21
	Master's	18	29
	Undergraduate	31	50

Note. n = number, % = percentage

Data Collection

An e-mail with a link to an online survey questionnaire was sent in January 2018 by the Head of the International Students and Scholars (ISS) Office at the University of Arkansas to each of 165 international African students at the University of Arkansas. This requesting e-mail was sent to the participants after a written authorization was granted by the Chair of Institutional Review Board (IRB) Committee (Appendix A). Recipients were requested to complete the survey questions and submit them, as soon as possible.

Due to a low rate of response reception, using ASO’s LISTSERV, a reminder e-mail was sent to student members of the organization two weeks later, but international African students who were non-members were unreachable. Unfortunately, the ISS office at the University of Arkansas did not disclose the participants’ emails to the researcher. Therefore, it was impossible to send reminders to every participant in this study.

The online survey was open for responses from the participants from January 30th to February 28th, 2018. After this period, the survey was closed, and there were 62 submissions (37.6% of the target population).

After collecting the data, they were converted from a Google form into an Excel spreadsheet for the descriptive statistics. After this conversion, the data was inspected and three participants were eliminated for not reporting their GPA. Consequently, only 59 participants remained (35.8% of the target population).

After the data inspection, the participants were classified by the most involved (those who reported having more than 20 hours of ECAs participation) and the least involved (those who reported having less than 20 hours of ECAs participation). The researcher established 20 as the milestone to determine the most involved participants in ECAs and the least involved participants because the Center for Community Engagement (CCE) at the University of Arkansas considers students as members of the Volunteer Action Center (VAC) once they reach 10 hours of volunteering service. CCE offers eligible students membership card perks, and additional perks are provided when students reach 25, 50, 75, 100 or 200 + hours of service (University of Arkansas, 2018). Based on this CCE’s criteria, the researcher established a number of hours between

the first award (10 hours) and the second award (25 hours) to define the most engaged participants and the least involved participants, for this study.

Following the participants' classification, two independent *t*-tests were conducted to find the difference in GPA between the most involved participants and their least involved peers. According to Abbot (2011), *t*-tests are typically conducted in studies with relatively large samples of 40 or more participants. Therefore, a sample of 59 respondents meets this methodological requirement. Additionally, the qualitative data were coded, and a thematic analysis was conducted for the qualitative data. Refer to Table 2 to see Creswell and Clark's (2007) steps to quantitative and qualitative analysis, and how the researcher applied Creswell and Clark's steps to this study.

Table 2. Steps to analyze data

	<i>Creswell and Clark's Quantitative Steps</i>	<i>Researcher's Steps</i>	<i>Creswell and Clark's Qualitative Steps</i>
Step one	<ul style="list-style-type: none"> - Coding data by assigning numeric values - Recording or computing new variables for computer analysis - Cleaning the database - Recording new variables for computer analysis - Establishing codebook 	<ul style="list-style-type: none"> - Convert data from a Google form into an Excel spreadsheet - Inspect Excel data analysis tool 	<ul style="list-style-type: none"> - Organizing documents and visual data - Transcribing text for computer analysis
Step two	<ul style="list-style-type: none"> - Visually inspecting data - Conducting a descriptive analysis - Checking for trends and distributions 	<ul style="list-style-type: none"> - Visualize and compare data correctness between Google form and Excel spreadsheet - Classify participants between the most involved 	<ul style="list-style-type: none"> - Reading through the data - Writing memos - Developing qualitative codebook

		and the least involved - Select different colors to distinguish data - Choose Excel filter tool to sift the data from the dataset	
Step three	- Choosing an appropriate statistical test - Analyzing to answer research questions or test hypotheses - Reporting inferential tests, effect sizes, confidence intervals - Using quantitative statistical software programs	- Select an independent T test for the research question one - Choose Excel software to conduct the T test - Use similar background color for identical answers to a question - Use the Excel filter tool to identify data of a similar category	- Coding the data - Assigning labels to codes - Grouping codes into themes (or categories) - Interrelating themes (or categories) or abstracting to smaller set of themes - Using qualitative software programs

Step four	- Representing results in statements of results - Proving results in tables and figures	- Report statistical results in statements and tables - Present the findings discussing the themes through statements and tables	- Representing findings in discussions of the themes or categories - Presenting visual models, figures, tables
Step five	- Using external standards to establish validity and reliability of current data	- Repeat T test procedures to check results reliability - Submit to advisor checking	- Using researcher, participant, and reviewer standards - Employing validation strategies

	- Time constraint prevented from peer and participants' Review	(e.g. member checking, triangulation, peer review
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The respondents were also classified by sports ECAs participants and non-sports ECAs participants. Sports ECAs participants were those who reported being involved in sports ECAs of any type, whereas those respondents who did not mention being involved in sports ECAs were considered as non-sports ECAs participants.

Survey Collection

Research Question 1 used an independent *t*-test to answer: Is there any difference in the GPAs between the international African students at the University of Arkansas who were most involved in ECAs and their less involved peers? Of the 59 African students, 24 reported having more than 20 ECA hours (the most involved African students), whereas 35 African students reported having less than 20 ECA hours (the least involved African students). Of the 24 most involved African students, the mean of their reported GPA was 3.56, with a mode of 4 and a median of 3.65. The range of their reported GPA was 1.7, with the minimum reported GPA of 2.3 and the maximum of 4. Of the 35 less involved African students, the mean of their reported GPA was 3.6, with a mode of 4, and a median of 3.7. The range of their reported GPA was 1.2, with the lowest reported GPA of 2.8 and the highest 4.

The observed independent sample *t*-test's results, with an $\alpha = .05$, was insignificant, $t(57) = 2.00, p = .72$, concluding that there was no significant difference in GPA between the international African students ($M = 3.56, SD = .42, n = 24$) at the University of Arkansas who were most involved in ECAs and their less involved peers ($M = 3.6, SD = .33, n = 35$). Appendix B shows the most involved and the least involved African students' reported GPA data.

Research Question 2 used an independent *t*-test to answer: Is there any difference in GPA between the international African students at the University of Arkansas who were most involved in sports ECAs and their peers involved in non-sports ECAs? Of the 59 African students, 20 reported participating in sports ECAs, whereas 39 African students reported being involved in non-sports ECAs. Of the 20 involved in sports ECAs, the mean of their reported GPA was 3.49, with a mode of 4 and a median of 3.55. The range of their reported GPA was 1.7, with the minimum reported GPA of 2.3 and the maximum of 4. Of the 39 surveyed African students involved in non-sports ECAs, the mean of their reported GPA was 3.64, with a mode of 4 and a median of 3.7. The range of their

reported GPA was 1.1, with the lowest reported GPA of 2.9 and the highest 4.

The observed independent sample *t*-test’s results, with an $\alpha = .05$ was insignificant, $t(57) = 2.00, p = .14$, concluding that there was no significant difference in GPA between the surveyed international African students ($M = 3.49, SD = .45, n = 20$) at the University of Arkansas who reported participating in sports ECAs and their peers ($M = 3.64, SD = .31, n = 39$) who reported participating in non-sports ECAs. Appendix C shows the reported GPA data of the surveyed African students at the University that reported participating in sports ECAs and their peers who reported being involved in non-sports ECAs.

Research Question 3 used a thematic data analysis to answer: How do international African students at the University of Arkansas perceive their ECAs participation? Over 70% of the participants asserted that ECAs had a favorable influence on their academic learning, whereas 7% percent stated otherwise. Table 2 displays the descriptive statistics on the participants’ positive perceptions of the impact of ECAs on academic outcomes (AOs).

Table 2. Surveyed African students’ positive perceptions of the influence of ECAs on AOs

<u>ECAs have a positive impact on my learning outcomes</u>		
	Frequency	%
Neutral	11	18.6
Strongly disagree	2	3.4
Disagree	2	3.4
Agree	35	59.3
Strongly agree	9	15.3
Total	59	100

The surveyed international African students at the University of Arkansas were also asked whether they thought participation in ECAs had a negative influence on their academic outcomes (AOs). Eight respondents (13.5%) reported that involvement in ECAs impacted their AOs negatively. However, 41 participants (60.5%) reported that involvement in ECAs did not impact their AOs negatively. Table 3 shows the statistics of the respondents’ negative perceptions of the impact of ECAs on AOs.

Table 3. Surveyed African students’ negative perceptions of the influence of ECAs on AOs

<u>ECAs disturb my studying program</u>

	Frequency	%
Neutral	10	17
Strongly disagree	10	17
Disagree	31	52.5
Agree	8	13.5
Strongly agree	0	0
Total	59	100

Research Question 4 also used a thematic data analysis to answer: Why do international African students at the University of Arkansas participate in ECAs? This question was purposefully posed to understand the reasons or the purpose for African students at the University to participate in ECAs. Among the 59 surveyed international African students at the University of Arkansas, a moderate number of participants (13.6%) stated that they were involved in ECAs purely to help and have fun. However, over 37% of the participants reported that they engaged in ECAs to (1) help and have fun, (2) meet new people, and (3) exchange experiences. Table 4 displays the statistics of why the surveyed international African students at the University of Arkansas participated in ECAs.

Table 4. Reasons for the international African students to participate in ECAs

Reasons for participating in ECAs... Select all that apply		
	Frequency	%
helping and having fun	8	13,6
earning credit hours for a course	0	0
meeting new people	3	5,1
exchanging experiences	2	3,4
adding to a resume (CV)	0	0
helping and having fun, meeting new people	9	15,3
helping and having fun, exchanging experiences	6	10,1
helping and having fun, enriching resume (CV)	1	1,7
earning credit hours for a course, exchanging experiences	1	1,7
meeting new people, exchanging experiences	6	10,1
helping and having fun, earning credit hours for a course,	1	1,7
exchanging experiences		
helping and having fun, meeting new people, exchanging experiences	22	37,3
Total	59	100

DISCUSSION AND CONCLUSIONS

This study was conducted to find associations between the participation by the international African students at the University of Arkansas in ECAs and their GPAs. The primary hypothesis was that International African students who were least involved in ECAs would scholastically perform better than their peers who were most participative in ECAs. However, the results of this study did not confirm the hypothesis. Furthermore, the first observed independent sample *t*-test's results conducted to find whether there was any difference in the GPAs between international African students at the University of Arkansas who were most involved in ECAs and their less involved peers were not statistically significant, concluding that there was no significant difference in the GPAs between the surveyed international African students at the University of Arkansas who were most involved in ECAs and their less involved peers. Similarly, the second observed independent sample *t*-test's results conducted to find whether there was any difference in the GPAs between the international African students at the University of Arkansas who were involved in sports ECAs and their peers who were involved in non-sports ECAs were insignificant. Therefore, there was no significant difference in the GPAs between both groups.

The qualitative results of this study show that over 74% of the surveyed international African students at the University of Arkansas stated that ECAs had a positive impact on their school achievement; approximately 70% of the surveyed African students at the University disagreed that participation in ECAs had a negative influence on their studying programs. Additionally, over one-third of the participants (37%) reported being involved in ECAs to (a) help and have fun, (b) meet new people, and (b) exchange experiences.

The results of this study, which can be best characterized as — an embedded mixed methods research, — contradict several findings of previous studies. Darling et al. (2005), Eccles et al. (2003), and Moriana et al. (2006), for example, studied the relationship between ECAs, academic performance and adolescent adjustment in secondary and high school students. These researchers found that students who were more involved in ECAs, including sports, had better GPAs or grades. Additionally, Dumais (2006), in her study with kindergarteners, first, second and third graders, found that participation in ECAs provided “gains in reading achievement test scores between first and third grade and third grade teachers’ evaluations of mathematics skills...” (p. 177). In a literature review on effects of ECAs and academic achievements, Massoni (2011) reported that students who participated in after-school activities had, among other gains, better grades than their peers who did not

participate in ECAs. However, in this study, no significant difference was found in the GPAs between the students who were most involved in ECAs and their peers who were least involved.

The discrepancy in results between this study and many previous studies on associations between participation in ECAs and academic outcomes (AOs) may be influenced by three main factors: participants' age, the reliability of the reported GPAs, and the sample size. This research was conducted with adult college students who might possess more discretion and life experience for being involved in ECAs compared to the participants in many prior studies, who were mostly kindergarten, elementary, secondary or high school students. In this study, the GPA was self-reported by the participants and the sample size was much smaller in comparison to several previous studies, namely Lipscomb (2007), which involved a national data set.

The findings of this research also contrast the results of earlier studies by Fox et al. (2010) that found a difference in GPA between students who were involved in sports ECAs and their peers who were involved in non-sports ECAs. Fox et al. studied the relationship between physical activities and sports team participation and AOs among secondary and high school students. In their study, they found that students who participated in sports teams had higher GPAs than students who did not participate in sports teams.

The divergence in results between this study and the previous studies by Fox et al. may be related to the fact that most of the previous studies involved high and/or secondary school students who might be engaged in competitive sports, whereas this study involved college students who might participate in sports ECAs for pleasure.

The trends of the study on the surveyed University of Arkansas African students' perceptions of participation in ECAs are similar to the findings of the majority of previous studies in positively associating ECAs with AOs. Over 74% in this study asserted that involvement in ECAs had a positive impact on their academic learning. These perceptions seconded the vast literature on benefits of ECA participation in AOs. Lipscomb (2007), for example, associated secondary school students' participation in ECAs with "a 5 percent increase in Bachelor's degree attainment expectations" (p. 463). Feldman and Matjasko (2005) related structured ECA participation to "positive academic, behavioral, psychological, and young adult outcomes" (p.202). Thus, confirming the previous research results, the majority of the surveyed students in this study perceived that their involvement in ECAs benefited their AOs.

Notwithstanding the majority of the participants of this study associated their involvement in ECAs with favorable school outcomes, approximately 13% of the participants negatively associated their involvement in ECAs with their academic programs. The stance of

example these 13.5% of participants supports a few previous studies. For Lipscomb (2007), for, participation in ECAs may negatively influence AOs, if it sacrifices the time for school work, such as assignments and homework completion, and test preparation. Therefore, this percentage of participants in this study may preclude their participation in ECAs if they think that such involvement takes their time from studying.

The findings of this study on understanding the purposes for the surveyed international African students to participate in ECAs seem to support certain ECA and AO association theories, particularly the social capital model (Broh, 2002). For instance, over one-third of the participants (37.3%) reported that they were involved in ECAs to (a) help and have fun, (b) meet new people, and (c) exchange experiences. These results corroborate the social capital main tenet, which is boosting membership networks and control among people within a community (Broh, 2002). According to Broh (2002), these social networks and the control system generate academic success.

Future Studies and Implications

The researcher recommends future studies to have a more representative sample. Results from a greater sample size would have more external validity and statistical power (Button et al., 2013) than the results from 35.8% of the final sample of this study. Except for the representativeness of the sample, a much larger sample would allow the researcher to explore in-depth certain predictor and outcome variables. For example, in this study, the researcher was interested in finding whether there was a difference in GPA between highly involved participants (those who reported having more than 31 ECA hours) and their less involved peers (those who reported having less than 10 ECA hours). However, the sample size of both groups failed to meet the size requirements (normally more than 30 participants) to conduct a *t*-test (Abbot, 2011).

The findings of this study can be a valuable aid to a variety of professionals, including (but not limited to) educators and advisors, in understanding current international African students at the University of Arkansas and other institutions alike, regarding their involvement in ECAs. Although this study did not find a significant difference in GPA between African students who were most involved in ECAs and their peers who were less involved in ECAs, educators, advisors and other interested professionals may comprehend that several African students at the University of Arkansas were involved in ECAs to certain degree. Additionally, the trends of the surveyed African students' opinions on (1) the associations of their ECAs participation and their academic achievements and (2) why they participate may be insightful for educators, advisors, the ISS, and ICT personnel at the University of Arkansas in order to better orientate prospective African students at the University.

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