

Uniform Assessment of Community Engagement: A Preliminary Analysis in the Development of the Benefits of Academic Community Engagement (BACE) Scale

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Abstract

Academic Community Engagement (ACE) is defined as a teaching pedagogy that combines community engagement with academic instruction. This research is a work in process for developing a uniform assessment scale to measure the Benefits of Academic Community Engagement (BACE). In two rounds of pilot research, we were able to assess the face validity, content validity, construct validity, and reliability of the BACE scale. The scale seems to show initial promise and further refinement will only improve its applicability.

Introduction

Community engagement has been around for centuries. Increasingly, both high school and college students are becoming more engaged with their community (Toncar et. al. 2006). Ehrlich (2000) defines *community engagement* as “...working to make a difference in communities through individual or collective actions designed to improve the quality of life.” Ehrlich (2000) further goes on to state that community engagement “...requires collaborative, reciprocal processes that recognize, respect, and values the knowledge, perspective, and resources shared among partners.” While the above definition has its merits, its generic nature limits its applicability within academic institutions. Therefore, we propose that the term **Academic Community Engagement** (ACE) be adopted when referring to community engagement within an academic setting and be defined as “A teaching pedagogy that combines *community engagement* with *academic instruction*.”

While most of the original ACE pedagogy (sometimes referred to as experiential learning, service learning, live case study, and community involvement) was initiated by the government, its broader use in the classroom began in the 1960’s (Kendall 1990; Kennedy et. al. 2001; Kolb 2004; Putkus 2000; Gujarathi et. al. 2002). Kolb (1984) believes that for some students (those that learn through active experimentation), all classroom pedagogy must include some type of experiential-based learning. That is, listening to lectures and reading textbooks is inadequate

(Madsen et. al., 2006). In fact, Dallimore (2002) argues that students of today are not adequately prepared for the global competitive environment.

There are numerous types of courses that incorporate ACE pedagogy. For example, *internships* (paid or unpaid; working for-profit or not-for-profit organizations) and *class projects/activities* (field work; consulting projects for actual clients). As universities (in their accreditation process) struggle with teaching students personal responsibility, social responsibility, ethics, and leadership skills, ACE pedagogy can be considered a viable methodology to instill these core values.

Proponents of the ACE pedagogy argue that there are several benefits of the ACE pedagogy to student's *academic development* (Eyler et. al. 2001; Razzouk et. al. 2003; Madsen et. al. 2006; Tucker et. al. 1998; Astin et. al. 2000; Michaelsen et. al. 2000; Munter 2002; Gujarathi et. al. 2002; Smith et. al. 2004; Godfrey 1999). ACE pedagogy helps student's master course material (content), it gives students the ability to translate course material to real world (application), helps students learn problem solving and decision making skills, helps them develop critical thinking and cognitive development skills, makes the course seems more relevant to a student's career, interaction with the community partner may provide future job prospects, students learn presentation skills, and it creates an environment of active (versus passive) learning. Similarly, the pedagogy helps student's in *personal development*. This includes improved one's self efficacy, developing leadership and communication skills, students learn small group collaboration skills, teamwork dynamics, time management skills, networking skills, synthesis and analysis skills, conflict resolution skills, writing skills, etc. Most important, a student learns how to learn, thereby preparing them for a lifetime of learning. Research shows that students tend to be more motivated in ACE courses than non ACE courses (Klink et. al. 2004).

While each of the above stated benefits has been well documented (Eyler et. al. 2001), unfortunately, there are very few assessment tools that faculties across all disciplines can use to measure their student's perceptions of the benefits of the ACE pedagogy. After extensive research of the literature, we found the Service Learning Benefit (SELEB) scale that was developed, refined, and used to evaluate the benefits of community engagement (Toncar et. al.

2006). While developing the SELEB scale, the authors took great care to assess the scales reliability and validity. The scale was developed using Churchill (1979) methodology, where the original 27 items were factor analyzed and reduced to 12 items. The final scale consisted of four factors (practical skills, citizenship, personal responsibility, and interpersonal skills).

This paper will attempt to develop the **Benefits of Academic Community Engagement (BACE)** scale. The BACE scale will be similar to the SELEB scale (e.g., it will be based on students perception of the benefits of community engagement) yet it will be different (e.g., it will be developed so as to be utilized across multiple disciplines). This was critical for us, since the institution had gone through great lengths to standardize the process and determine what constitutes (qualifies) as an ACE pedagogy course. For example, ACE courses includes classroom instruction (where students are taught theory, ideas, concepts, etc.); students participate in a minimum number of documented hours (e.g., nine hours per semester) of community engagement; the engagement is tied (relevant) to classroom instruction (what is being taught in class); the instructor receives feedback from the community partner(s); the instructor includes three statements in the syllabus about community engagement (i.e., the value of community engagement, how it is linked to a course objective and part of a grade, a guidelines of a written reflection about the experience).

For an academic institution to develop their own scale for their own purpose is an important academic exercise. Developing the BACE scale is prudent, since the institution wanted the scale to be used campus wide, so that assessment could be done in all courses that used ACE pedagogy. The original SELEB scale's validity was tested using a small sample (42) of students in two business courses. Second, since the ACE pedagogy had been institutionalized (i.e., it is in the faculty evaluation system, it is on students transcripts, there is a prestigious award for community engagement, etc.), we received input from faculties across multiple disciplines who wanted to include specific items on the university wide instrument (i.e., faculties in the arts, education, science, and social sciences had different recommendations). Third, while the term service learning and academic community engagement is used interchangeably in the literature, we believed that developing a customized scale using the language that the faculty is familiar with make give the scale greater legitimacy. Fourth, the SELEB scale had not undergone

extensive re-validation and not received widespread scrutiny (i.e., using different samples from different academic institutions) since development. Therefore, we did not feel comfortable using it exclusively and without modification.

Scale Development

We started the process of scale development by including all the original twelve items from the SELEB scale. Using Churchill's (1979) recommendation, we added several additional items that were recommended by other faculties across multiple disciplines. Next, the wordings of the items were changed to reflect ACE pedagogy (rather than service learning). The original SELEB scale used an "important scale" (from 1-7) and we wanted to use a "Likert scale" (1-5 point) with a "N/A" option. Therefore, all items had to be modified to fit the "new" Likert scale.

Pilot Study One

The primary purpose of the first pilot study was to determine the *face validity* of the BACE scale (i.e., the degree to which the items measure the benefits of community engagement). This was critical, since the BACE scale was significantly different than the SELEB scale. Both students and instructors were asked to critique the wording of each of the items. Two hundred and twenty one students participated in this initial pilot study in fall 2011. A convenient sample of nine courses was requested to participate. These included courses in Mass Communication (4), Education (4), and Sociology (1). The nine courses were taught by nine different instructors. The classes were a mix, that is, working with both for-profit and non-profits. All irrelevant, badly worded items, etc. were either reworded or eliminated from further consideration.

Since several demographic questions were included in the new instrument, we conducted some basic descriptive analysis to identify what students thought about their ACE course. Students like the fact that the course *makes a difference* (4.39). Students like the fact that they can apply the subject matter to *real world situation* (4.36). Students say that they would *recommend* the ACE course to a friend (4.33). Students believe that ACE courses *benefit the community* (4.24). Students found ACE course to be very *valuable* (4.23). In addition, we wanted to identify student's views about community engagement. They disagreed with the statement that they "probably won't volunteer in the community after taking the ACE course" (1.77). A low mean

indicated that they probably will volunteer. They thought they would have learned less from the course if more time was spent in the classroom instead of doing community service. That is, community service helped them learn the course material better. Approximately, 50% of the students indicated that they had not been volunteering in their community (prior to taking the ACE course).

The secondary purpose of the first pilot study was to determine the *content validity* of the BACE scale (i.e., do the items adequately represent/cover the content of construct). Since this was the first pilot study, we deemed it necessary to let the respondent describe the benefits of community engagement in their own words. Students were asked (in an open-ended format) to indicate their perception of the benefits they received from their ACE course (without the use of a Likert scale). Here are some of the responses provided: demonstrated caring and/or compassion; the cause – helping and serving others is important; experience was life changing; provided networking opportunity; taught me how to be responsible; taught me leadership skills; found the experience to be fun. Next, students were given the opportunity to indicate in their own words what challenges they had in their ACE course (without the use of a Likert scale). Here are some of the responses provided: took more time; unclear as to what was being accomplished; interfered with work; commitment took away from education

Field Study two

The primary purpose of the second pilot study was to determine the reliability and validity of the BACE scale using a larger disparate sample of courses. The secondary purpose of the second pilot study was to determine if any differences existed across the various demographics questions. Sixteen courses participated in the second pilot study. While this was a more representative sample of courses offered at the university, it was still a convenient sample. It included courses in Education (6), and Sociology (2), Agriculture (2), Library Science (2), Marketing (1), Management (1), Honors program (1), and Internship (1). A total of 350 students completed the survey in spring 2012.

While we used some modified items from the original SELEB scale (with four factors - practical skills, citizenship, personal responsibility, and interpersonal skills), many of the items within the

BACE scale were significantly different (due to pilot study one), thereby anticipating an entirely different factor solution than the SELEB scale. We assessed the *construct validity* of the BACE scale by looking at the factor loadings (using the eigenvalue > 1 criteria) on a rotated factor matrix using maximum likelihood extraction method with varimax rotation. All items with factor scores above 0.5 were analyzed. As indicated in Table 1, we found two underlining factors (not four as in the original SELEB scale). Several raters were requested to label the two factors. The raters recommended that they be labeled internal and external factors. *Internal* factor consisted of items that benefited the student personally. They included 10 items (e.g., ACE course enhanced their leadership, communication, problem solving, organization, critical thinking, workplace skills, etc.). *External* factors had 5 items that students believed benefited the community (e.g., ACE course made me more aware of community needs, that difference exist in the community, feeling of personal responsibility, course made a difference in the community, etc.).

Table 1: BACE Scale

Items	Internal	External
Participating in the community helped enhance my <i>leadership</i> skills.	0.741	
The community service I did in this course helped me to <i>analyze problems</i> and <i>think critically</i> .	0.720	
The community service in this course helped me to develop <i>workplace skills</i> .	0.716	
The community service in this course has made me <i>more employable</i> .	0.712	
The community service in this course assisted me in defining the <i>type of work</i> I want to do in the future.	0.705	
Participation in the community helped enhance my <i>communication</i> skills.	0.701	
The community service in this course helped me to develop <i>organizational skills</i> .	0.684	
The community service in this course helped me to <i>connect theory with practice</i> .	0.612	
Working in the community helped me to define my <i>personal strengths and weaknesses</i> .	0.608	
The community service in this course helped me to apply the subject matter in a " <i>real world</i> " situation.	0.572	
Conbach's alpha	0.936	
This course helped me understand my <i>responsibility</i> to serve the community and develop my <i>citizenship skills</i> .		0.775
This course helped me understand that I can <i>make a difference in my community</i> by being involved.		0.740
The community service aspect of this course showed me how I can become <i>more involved</i> in my community.		0.729
This course helped me understand the <i>differences</i> (i.e., cultural, racial, economic, etc.) that exist in our community.		0.668
The community service aspect of this course helped me to become <i>more aware of the needs in my community</i> .		0.667

Conbach's alpha		0.895
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Next, *reliability* was assessed on each of the two factors using Cranach's alpha (see Table 1). The reliability measures were 0.94 and 0.90 respectively. The high reliability of the BACE scale could be due to several reasons. First, BACE scale was based on a previously validated SELEB scale. Second, face validity and content validity had been assessed in pilot study one, thereby eliminating ambiguity in the items. Third, a larger more robust sample was utilized for the second pilot study.

Results

Several of the faculties were also interested in knowing what students thought about the course itself (rather than the benefits of the ACE pedagogy). Similar to previous studies, Table 2 demonstrates that students taking ACE courses find the courses extremely valuable (the mean difference is significant; p-value=0.000). Next, we wanted to determine what makes an ACE course "valuable". While value, in general, is determined by the ratio of benefits to sacrifice, we wanted to determine how students determine the value of an ACE course. We used a stepwise regression model to determine the most critical items in predicting "course value." Value of an ACE course is based on the course teaching students problem solving and critical thinking skills (p-value=0.000) and the course teaching them to apply the subject to real world (p-value=0.000). Therefore, faculties must make sure their ACE course is doing this (at a minimum).

Table 2: Paired t-test

Items	Mean
At the <i>beginning</i> of the semester I was uneasy about the community service component of the course.	2.82
At the <i>end</i> of the semester I thought that the community service aspect of this course was valuable.	4.37
t-vale = 16.919; degrees of freedom = 347; p-value = 0.000	

While the BACE scale is designed to assess the benefits of ACE pedagogy to students, we wanted to determine student's perception about the benefits of ACE courses to the community. Students believe that the relational exchange between community partners and the student are mutual beneficial (see Table 3). It is clear from Table 3, that students rated the entire experience of working with a community as excellent (means of 8.41 on a 10 point scale) and would

recommend other students take courses that adopt ACE pedagogy (4.22). Finally, it is believed that ACE pedagogy tends to help students be more civically minded (4.23). It is clear (see Table 3) that students intend to be community oriented well into the future (4.22). Thereby, supporting the notion that ACE course can make a student more socially responsible (which is one of the core values for many academic institutions today).

Table 3: Benefit to Community

Items	Mean	St. Dev.
The community service I did through this course <i>benefited the community</i> .	4.23	0.912
I probably will <i>continue to serve the community</i> after this course.	4.22	0.982
I would <i>recommend this course</i> to a friend.	4.22	1.065
On a scale of 1 to 10, where 1 is a bad experience and 10 is an excellent experience, I would rate my community service learning experience in this class/course as a ____.	8.41	1.784

Finally, we wanted to determine if there were any differences in responses across the various demographic questions. What we found was that female respondents were higher on all responses when compared to male respondents. Upon closer observation, we believe this is due to the fact that the sample was skewed (80% of the sample was females). We also compared the responses based on their commuting status and found that non-commuters tend to rate the items significantly higher than commuters. This could be due to the fact that commuters experience poverty of time and tend to have difficulty meeting their obligations to the community partners; thereby reporting less benefit. While we did not ask any question on income (which could be an extraneous, intervening, or a moderating variable), it could be that commuters have lower income and appreciate the instructor's motivation for teaching an ACE course and realize the benefits of the ACE pedagogy. Next, we looked at the ethnicity of respondents and found that non-whites tend to consistently rate higher on the BACE scale than whites. This could be due to the fact that 75% of the sample was white (biasing the results). Another reason for this difference could be that, in general, non-whites tend to be lower on the socio-economic scale; therefore they tend to appreciate the needs of the community better. Hence, they tend to value the benefits of ACE pedagogy more.

Conclusion

This difference in number of factors (2 vs. 4) in the BACE scale could be due to the fact that the original SELEB scale was developed using only business students and our sample included

courses from disparate colleges (thereby producing diversity in instruction, instructors, projects, community partners, course content, etc.). Based on these preliminary analyses of two pilot studies, we can conclude that ACE courses provide an ideal laboratory for students to engage in experiential learning. It is obvious that many courses and disciplines are suitable for ACE pedagogy, because the sample included courses in Education, Business, Sociology, Mass Communication, Library Science, Agriculture, etc. Our research has demonstrated that the ACE pedagogy can be very beneficial to students. More specifically, students indicated that they learnt problem solving, decision making, critical thinking, leadership, communication, teamwork, time management, social responsibility, citizenship, understanding diversity, etc.

Based on this research and feedback we have received (anecdotally) from colleagues that currently teach ACE course, we can also make some broad recommendations. First, to maintain complete control of the course, ACE pedagogy courses must have “structure”. That is, the instructor should have thought about the assignments, project, due dates, etc. Second, on the first class meeting, the faculty must orient the students on the benefits of ACE pedagogy; otherwise students will be critical on the end of semester faculty evaluation. Third, students must be given the opportunity to self select participation in the ACE courses. This can be done by offering multiple sections of the same course (some that are ACE designated and some that are not ACE designated). Alternatively, the professor could include an opt-out option in his/her syllabus (e.g., write a research paper in lieu of community engagement). Fourth, students must be given the opportunity to reflect on their community engagement experience. Since reflection is a function of one’s experience, it can be positive and/or negative. To get an reflection, faculty must grade the reflection on a “completion” scale.

Future Research

Asses the benefit of ACE pedagogy to students and developing a scale that could be used by all faculties is an important academic exercise (McCarthy et. al. 1999). It is clear from our preliminary research that we are on track in achieving this goal. It is also obvious that we still have some work to be done on refining the instrument further. First, there are a couple of double-barrel items on the BACE scale; we would like to split the item into two independent items next time. Second, we would like to get more representative sample (by using a

probability sampling methodology) of the entire population of students during the next pilot study. Since this was a preliminary study (using a convenient sample) we did not assess the validity of the sample. Sample validation can be determined by comparing the demographic of the sample with the demographics of the population using a chi-square goodness of fit test. Third, we would like to include the “income” question. This may help us in developing a better predictive model and it may also help us determine if any differences exist across the various income levels.

Besides the benefits of the ACE pedagogy to students, the pedagogy is valuable to both faculty and institution (McIntyre et. al. 2005). It helps faculty establish contacts, improves public relations within the community, increases student retention, provides possible funding opportunities, etc. To assess these benefits to the two additional stakeholders, a future research endeavor should include an assessment tool to measure these benefits. These additional instruments may help us measure benefits of community engagement in a dyadic or triadic setting. Our initial databases search did not identify any scales or studies that have developed such assessment tools.

Previous research has recommended that faculty consider numerous issues (Klink et. al. 2004; Madsen et. al. 2006; Smith et. al. 2005; McCarthy et. al. 1999) when designing their ACE course. For example, should the engagement activity be done in groups or individual; should the community partner be a small, medium, or large organization; is the ACE pedagogy more suitable for undergraduate or graduate courses; what level of involvement should the instructor maintain with the community partner (high vs. low); should the community partner be a for-profit or not-for profit organization; should the ACE pedagogy be used in a core or an elective course; what percentage of the final grade should the community engagement component be; should the ACE pedagogy be used in small or large size classes. While these issues have been discussed extensively in the literature, no research to date has looked at the benefits of each of these issues. Assessing the benefits of these issues would be of tremendous value to faculties, especially those teaching ACE course for the first time, when designing their ACE pedagogy courses.

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