

The Impacts of National Faculty Advisor Training on the Success of ASCE Student Chapters/Clubs

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Abstract

In September 2000 the American Society of Civil Engineers (ASCE) held its first nationally sponsored annual training workshop for student group faculty advisors. The training workshop was designed to enhance the success of student chapters/clubs through effective advising and had three goals: 1) to impart the vision of the value and purpose of ASCE student chapters, 2) to give the advisors the tools that they need to make their student chapters function, and 3) to create a network of ASCE faculty advisors.

Exit and follow up perception surveys both indicated that the training was very well received by the participants. This study seeks to further identify the actual impacts that this training had on the success of the student chapters whose advisors attended the 2000 workshop. Data from the ASCE student chapter/club annual reports, ASCE membership data and additional follow-up surveys are used to determine these impacts. The achievement of the workshop goals is assessed and other actual impacts are explored.

The results of this work sheds light on the usefulness of such training programs and provides information that may help to further focus the goals of advisor training in volunteer organizations.

Introduction

The American Society of Civil Engineers (ASCE) maintains a system of student chapters and clubs (hereafter referred to simply as chapters) whose objective “is to help students prepare themselves for entry into the Civil Engineering profession and society.”¹ These student chapters are seen as being a valuable means of supplementing the technical education provided by a typical civil engineering curriculum with professional development experiences. ASCE also views these chapters as a source of potential professional members. A successful chapter is considered to be one that has demonstrated effectiveness in meeting the stated objective.

The ASCE Committee on Student Activities (CSA) is charged with the responsibility to recommend policy and implement approved programs to nurture and enhance the student chapter experience. Over the years CSA has developed criteria for evaluating the success of student chapters. From years of reviewing annual reports submitted by student chapters and from personal anecdotal experience, it was apparent to members of CSA that there was a big difference in the implementation of the chapter program across the country.

Among the CSA members it was felt that many chapters were struggling for one or more of three basic reasons:

1. They did not have the full vision of what a student chapter could do for the students and their academic programs,
2. They did not have understanding of the tools and resources at their disposal for implementing the student chapter program.
3. They did not have a support network that would help them to get the support that they needed.

In determining how most effectively address this problem, the Faculty Advisor (FA) was identified by CSA as being the key position in the organizational structure of a student organization. The FA is the one individual in a student chapter that is fairly constant over time (students pass through and take their experience with them), has the most experience with the profession, knows their university organization and limitations, and provides training to student officers that actually direct the chapters. Since the FA is such a critical person within the organization, the CSA determined their best opportunity to have a lasting impact on the student chapters was to provide the training that the FAs need to be effective in their assignment. Consequently, the CSA submitted a proposal to the ASCE Board of Directors and eventually obtained permission and funding to implement a Faculty Advisor Training Workshop (FATW) in the fall of 2000. In 2003 the workshop was expanded to include Practitioner Advisors (PA) and renamed the Practitioner and Faculty Advisor Training Workshop (PFATW). In practice, the PA is often as key to student chapter's success as the FA.

To address the reasons for the lack of success in some chapters, the workshop was designed with these three main goals:

1. Impart the vision of the value and purpose of ASCE student chapters.
2. Give advisors the tools that they need to make their student chapters function.
3. Create a network of ASCE faculty advisors.

The workshop consists of presentations on the organization of ASCE, the intent and purpose of student chapters, resources that are available to assist chapters, and case histories from successful FAs. Participants come to the ASCE headquarters in Reston, VA at the beginning of the school year for the intense day and a half workshop.

Exit and follow-up perception surveys have come back with highly favorable results. It is quite apparent that the workshop has had an impact on, and is very popular with, the participants and the workshop faculty. The question addressed by this study is whether or not there are any other impacts on ASCE as the result of the FATW program.

This study was undertaken to determine what impacts the workshop has had on the individual student chapters and on the ASCE organization as a whole. Three different sets of data were collected and examined in order to identify any impacts that the workshop is having on ASCE. One obvious measure would be to look at the trends of annual report scores for the student chapters. The annual report is generally accepted to be the best measure of student chapter

performance and effectiveness available. Four years of annual report scores were obtained and analyzed. There is also the premise that more effective student chapters will lead to an increase in the number of student members who become professional members after graduation. To test this premise the numbers related to this membership conversion were obtained and analyzed. Finally, it was determined that it would be good to ask those that were involved in the first couple of workshops their perceptions regarding the impact of the workshop on them and their chapters.

Annual Report Evaluation

Each student chapter is required to submit an annual report of their activities to ASCE. These annual reports contain a wealth of detailed information about activities of the student chapters. These are evaluated by members of CSA at their spring meeting. The majority of the score is objective (based on numbers of specified activities) with some room for subjective evaluation of certain aspects of the chapter activity. The scoring is set up to encourage student chapters to diversify their activities to better meet the objectives of the organization. The annual report scores are the basis for the most prestigious ASCE national student awards.

This study presumed that the annual report scores were the best measure of changes in student chapter performance as the result of the FATW. The assumption is that scores should improve if chapters are being inspired to more fully implement the suggested activities. Also, since annual report preparation is a major topic of the workshop, the reports from chapters with trained advisors should more accurately reflect the activities of the organizations.

The scores for the report years 1999 through 2002 were used as the basis for this part of the study. Using this data was complicated for several reasons. First, some chapters failed to submit a report or submitted their reports after the deadlines. Late reports are not scored. Second, it appears that many of the FAs from chapters with a track record of good to excellent annual report scores attended the workshop. It is not expected that their scores would change substantially. Third, it is not known if the trained FA stayed with their student chapter over the years examined.

Several views were taken of the data. First, the average scores over each training group were determined over the four years of annual report data. Next, the individual chapter trends were examined and classified according to the apparent effect that training had on the trend of the chapter's annual report scores.

Table 1 shows the result of the averaging of the scores for each year and each group. Only the first two FATW classes were included in the table because they are the only ones with two or more years of annual report history. The "Not Trained" group consists of all student chapters that were not involved in any of the first three FATWs and hence the workshop does not have any effect on their annual report scores. This group was included as a control to compare the trained group results. For the two FATW groups, a horizontal line is placed to separate the pre-workshop scores from post-workshop scores.

Table 1
Average Annual Report Scores by Study Grouping

# of Chapters	FATW 2000		FATW 2001		Not Trained	
	40		27		182	
	Avg Scr% reporting		Avg Scr% reporting		Avg Scr% reporting	
1999 AR	63.8	85.0%	57.2	63.0%	50.7	56.6%
2000 AR	67.1	82.5%	54.6	85.2%	46.4	70.3%
2001 AR	66.5	85.0%	58.7	85.2%	51.2	70.9%
2002 AR	65.0	87.5%	58.7	88.9%	49.3	74.2%

The percent of chapters filing annual reports is included to determine the consistency of reporting of the populations represented by each group. It should be noted that the actual chapters not reporting changes from year to year which impacts the accuracy of the average scores.

It is fairly clear that the FATW did not have an appreciable impact on the overall score average of each group or on the faithfulness of the reporting. An interesting observation is that the attendees at the first FATW came from, on the average, relatively highly performing chapters. For such chapters, it is not expected that there would be substantial changes in annual report scores. It is also interesting to note that the chapters that have not attended training appear to be those that need it the most. This might indicate that personal drive of the faculty advisor and other factors that may have a bigger impact on student chapter success than the workshop.

Another view of the data that is more telling, and more in line with survey results, was obtained by classifying the chapters according to the trends of their annual report scores before and after training. Again, only the first two workshop participants were included because they were the only ones with sufficient history for a judgment to be made.

The chapters were divided into five categories according to the criteria given in Table 2. Tables 3 through 5 show the results of the classification exercise. Note that the data in Table 5 for the “untrained” chapter performance is based on the 111 (of 182 student chapters whose FAs have not been to a FATW) that submitted at least three annual reports in the four-year period that is being considered.

Table 2
Performance Classification Categories and Criteria

Category	Classification Criteria
Very poor	Scores dropped considerably after training
Poor	Scores dropped appreciably after training
Fair	Scores did not significant change after training
Good	Scores increase moderately or there was a short term increase after training
Very Good	Scores increased dramatically after training

Table 3
2000 FATW Performance Classification Results

	Very Poor	Poor	Fair	Good	Very Good
Number	4	6	18	5	6
Percent	10.3%	15.4%	46.2%	12.8%	15.4%
Avg. AR Score	38.1	61.2	69.1	59.3	59.2

Table 4
2001 FATW Performance Classification Results

	Very Poor	Poor	Fair	Good	Very Good
Number	3	2	9	8	5
Percent	11.1%	7.4%	33.3%	29.6%	18.5%
Avg. AR Score	56.2	45.5	58.4	54.1	58.7

Table 5
Untrained Chapter Performance Classification Results

	Very Poor	Poor	Fair	Good	Very Good
Number	10	25	38	28	10
Percent	9.0%	22.5%	34.2%	25.2%	9.0%
Avg. AR Score	41.8	49.1	52.9	55.1	48.3

Initially, the results from the two FATW sessions look encouraging. Some chapter annual report scores are improving after the workshop session. Many of them quite dramatically. It is interesting to note that those chapters have a “fair” rating (i.e. their scores did not change significantly during the time period) tend to have some of the highest annual report scores. This is to be expected since these are principally the better scoring student chapters. There is not much to improve on.

When the results are compared with the chapter’s whose FA did not attend a FATW, it is seen that the percentage of chapters with increasing and decreasing scores are not substantially different between the first FATW and the “untrained” chapters. There is a larger percentage of the FATW alumni in the “very good” category than in the Untrained group.

ASCE Membership Records

Another postulation was that more effective student chapters will result in more student members converting their membership to the associate member level after graduation. If the FATW results in more effective chapters then we should see an increase in student membership upgrades from chapters whose FAs have attended the workshop.

ASCE provided data, by student chapter and year, of students that have upgraded their membership since 1990. The data for the chapters represented in the first two FATWs were separated out and the rate of the upgrades compared before and after FATW attendance. This was also compared against similar data from the remaining chapters that have not sent a FA to a FATW. The results are plotted in Figure 1.

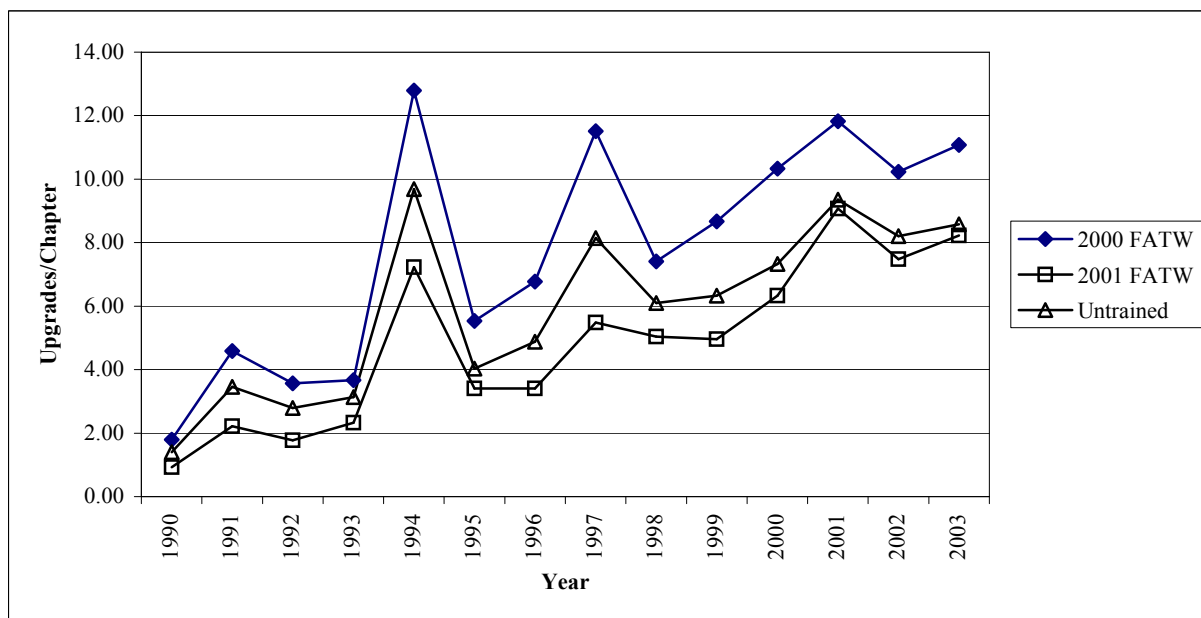


Figure 1
Student Membership Upgrades

The data does not show any significant increases that result from the FATW but does seem to support the assumption that more active student chapters produce more professional members to the society. The attendees of the 2000 FATW generally were from more active student chapters and the data shows that they also produce more professional members than the general population.

It would be interesting to research what influenced the peaks in 1994 and 1997. Such data may be useful in future policy planning.

The Follow-up Survey

The first two offerings of the FATW included exit surveys of participants as well as a nine-month follow-up survey. These surveys were designed to assess how well the workshop met its goals and to identify specific strengths and weaknesses that could be used in the planning for subsequent offerings. Another follow-up survey was administered at the end of 2003 in order to see how the participants feel about the effectiveness of the training and the impacts on their student chapters.

An invitation to participate in the online survey was sent via email to everyone (from all four offerings of the workshop) that has participated in the workshop either as a participant or as a facilitator. Thirty responses were received. One respondent's responses appear to be more applicable to another ASCE sponsored training activity and was not included in the study. The responses were sorted by the first workshop attended by the respondent. There were seven, four, eight, and ten participants in the 2000, 2001, 2002, and 2003 workshops, respectively, responded. This study focuses on the responses of the 2000 and 2001 workshop participants. This is consistent with the other parts of the study and is consistent with the study's goal to look at the longer term effects of the workshop.

The survey participants were asked seven questions.

The first question asked for an evaluation of how well the workshop met its three stated goals. They were asked to select from a list of response options for each goal. The options, and their associated numerical values, are poor (1), fair (2), good (3), very good (4), and excellent (5). Table 6 summarizes the results of the follow-up survey. The ratings are quite high for the first two goals (imparting a vision of the value and purpose of student chapters and giving the advisors the tools they need) and less enthusiastic for goal three (create a network of ASCE FAs).

Table 6
FA Response to Survey Question 1

Year	Goal #1 Vision of Value and Purpose	Goal #2 Provide Tools	Goal #3 Create Advisor Network
2000	4.71 (Excellent)	4.86 (Excellent)	3.29 (Good)
2001	4.75 (Excellent)	4.50 (Very Good to Excellent)	3.50 (Good to Very Good)

The second question asked the respondents to check the boxes that represented the sessions of the workshop that they have attended. This allowed the data to be sorted by first workshop attended.

The third and fourth questions asked the respondents to tell what they perceived as the major impacts that the workshop had on their effectiveness as a FA and on the effectiveness of their student chapters. Most respondents identified the parts of the workshop that had an impact on them, but did not discuss what the impacts were on their effectiveness as an advisor or on the effectiveness of their chapter. In some cases the answers were interchangeable between the two questions. Consequently, categorizing the results was a challenging exercise. It was apparent that all the respondents perceived that they came away from the workshop better prepared and motivated to function in their responsibility and that their chapters are better off as a result of it.

The major impacts that the workshop had on the participant's effectiveness as FAs generally are related to increased motivation (4 responses), ability to train student officers (6 responses), and a clearer understanding of the organization, its purpose (4 responses), resources (5 responses) and expectations (3 responses). Many also mentioned that the ideas gleaned from other's experiences helped them to be more effective (7 responses). All of which made it possible for them to be more effective.

The reported impacts on the effectiveness of the student chapters included increased motivation (4 responses), better understanding of leadership roles and/or expectations (3 responses), and increased recruitment (2 responses).

The fifth question asked respondents to identify any measures that indicate improvement of their student chapter since their participation in the workshop. Six respondents mentioned increased annual report scores, three mentioned increased number of activities, three mentioned increased meeting attendance, three mentioned increased membership, two mentioned more active officers, and one (each) mentioned an increase in scholarship winners and an increase in fundraising success.

The sixth question asked why ASCE should (or should not) continue to offer the workshop. All eleven respondents were in favor of continuing the workshop. Six respondents mentioned the training aspect as being every valuable. Three of these mentioned that this workshop should be limited to new or almost new FAs. Two mentioned the value of keeping the FAs motivated. One made comment that this program should result in more professional members. Networking amongst advisors and the workshop being a source of new ideas were each mentioned once.

The final question asked if the respondents would recommend the workshop to a colleague. All respondents check the box for definitely (the strongest recommendation available on the survey).

It was apparent, in the survey responses, that the workshop is a very popular event that is perceived as making the student chapter experience more valuable.

Observations

It was observed by members of CSA, at the time the FATW was proposed, that measuring the actual impact of workshop would be difficult at best and may never really be known beyond the perceptions of those involved and/or impacted. This is proving to be true.

Trends in annual report scores show that there is some improvement in the overall report scores for chapters whose FA attended the FATW, but it is not much greater than what occurred in the population as a whole. It appears that there is more activity in some student chapters as a result of the FATW. There are many other factors, not examined in this study, that can also be having an impact on this result. For example, there was not an attempt to determine whether or not the FATW participants continued as the FAs for the study period.

It is interesting to observe that a large number of the participants in the early FATWs advise chapters that already were perceived as being effective using the annual report and membership conversion measures. It is apparent that successful student chapter advisors are not content with the status quo and are, consequently, eagerly and constantly searching for ways to improve the effectiveness of their efforts. The FATW is a natural draw for such advisors. It is not surprising that the annual report scores of the chapters of these FAs were relatively unaffected by the workshop. Judging from comments received from these FAs the main benefit of the workshop was the reaffirmation and inspiration that they received from the workshop.

Looking at membership conversion data, no correlation was found between the FATW and membership conversions. The one observation that supports the premise that increased student chapter effectiveness will increase membership is the fact that the chapters whose FA attended the first FATW (these chapters had better than average annual report scores and activity levels) tend to produce a larger number of professional members.

The survey reemphasized early perceptions that the workshop is highly valued by those that participated in it. It is perceived as being very motivational and educational. There is no doubt that the FATW has had some strong positive effect on a handful of individual student chapters.

Conclusions and Recommendations

The results of this study leads to several interesting conclusions. Two significant conclusions are given here.

First, the workshop is very popular with those that have attended it. Indeed, all of the survey participants expressed their adamant feelings that the workshop should be continued. It is quite apparent that the workshop provides training and inspiration that is useful to those that seek it. The value of training and motivating FA results in more favorable attitudes towards the organization as a whole and about the FA assignment in particular.

Second, the workshop does not appear to be having a significant measurable impact on the effectiveness of student chapters as measured by annual report scores and increases in membership conversions. This result challenges the idea that FAs are the major influencing factor in a chapter's success. Other factors such as the nature of the students involved in a chapter, the significance of chapter advising in academic workload of the FA, the support provided by the academic department and/or local practitioners may be at least as significant.

The continuance of this workshop will continue to have positive effects within ASCE though it is recommended that CSA look closer at the content to find ways to convince less committed FAs

to make their student chapter a priority in their work. This is a challenging charge given the various pressures that are placed on academics in their other workload priorities. Means should also be found to get FAs from lower performing chapters to attend the workshops. Starting with the third FATW, alumni from early FATWs were allowed to attend the workshop. Several survey respondents from later FATWs strongly encouraged that the workshop be limited to new advisors and first time attendees. Bringing in more new and/or first time attendees will be vital to the success of this program given that, to date, only a small part of the organization has had contact with the workshop.

Bibliography

1. American Society of Civil Engineers (2001), *Official Register*, page 201.

Biographical Information

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Dr. Quimby is currently a Professor in and the Chair of the civil engineering program at the University of Alaska Anchorage. He served a four-year term on ASCE Committee on Student Activities, one year as the Chair of the committee. He has worked with ASCE student chapters since 1989. He is currently a member of the ASCE Educational Activities Committee.

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