

Bowling Alone and Leaving Students Behind: Placing ASEE Civil Engineering Division Membership Trends in Context

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Abstract

Membership in the Civil Engineering Division of the American Society for Engineering Education (ASEE) peaked at 680 in 2008. At the time of writing, membership has decreased by approximately 25% from that peak. This trend is consistent with declines in most divisions in Professional Interest Council (PIC) IV, which includes the Civil Engineering Division; the only divisions seeing growth in PIC IV were First Year Programs and Minorities in Engineering. Overall, membership in ASEE has declined as well and the American Society of Civil Engineers (ASCE) has also experienced declines in membership. Reports on membership organizations reveal that this problem is not unique to ASEE. More than a third of all membership-based organizations are not growing or shrinking, and nearly 40% of associations, like ASEE, shrunk or did not grow. Mature organizations (>10 years old) experienced the steepest declines in membership. Faculty membership in and involvement with professional societies is important for faculty and their students. From a student perspective, professional societies can bridge the gap from school to profession. From a faculty perspective, professional societies provide camaraderie and a space to share knowledge. Professional societies provide a mechanism for learned professions to establish standards of conduct, create bodies of knowledge, and other functions of self-governance. Modeling this behavior and activity is a vital part of the education of well-rounded engineering students.

In this paper we seek to uncover the reasons why membership is declining in the Civil Engineering Division and propose solutions to halting this decline. We will examine the tactics used by the Civil Engineering Division to attract members and conduct interviews with existing members to find out why they joined and stayed, those holding leadership positions to determine why they took on these roles, and with potential members to uncover barriers to membership. In addition, we will seek to uncover any relationships between faculty composition and membership. This understanding will guide the Civil Engineering division in targeting their recruiting and programming to ensure that the division remains a vibrant, relevant organization for its members.

Introduction and Background

In their analysis of the civil engineering profession to the models set by Abbott (1988) and Friedson (2001), Ressler and Russell (2009) demonstrate that civil engineering adheres well to the typical model of a profession by defining its body of knowledge, its focus on professional licensure as a necessary credential for practice, and its commitment to improving the quality of life to benefit all of humanity. Professional societies such as the American Society for Engineering Education (ASEE) and the American Society of Civil Engineers (ASCE) play important roles in organizing and maintaining these standards and commitments for their professions. Embedded in these roles are the obligations of the university to “contribute to students’ commitment to the profession as a career and contribute to a shared identity and feeling of community among the members of the profession,” (Ressler and Russell, 2009). Through membership in ASEE and ASCE, professors demonstrate what it means to be part of a

profession, and students become part of the profession and learn to collectively advance the goals of that profession.

In addition to these benefits to the profession, individuals more directly benefit from membership in professional societies through gaining additional technical and professional knowledge and skills through continuing education offerings, networking with peers, and leadership opportunities through participation in scholarly publishing, standards development, and thought leadership as part of a committee or other governance body (Hein, et al. 2016). Involvement in these activities by members also advances the mission of a professional society.

Despite these benefits, membership in professional societies has declined in recent years. Marketing General, Inc.'s (MGI) 2022 Membership Marketing Benchmarking Report showed that 38% of individual membership organizations reported a decline in membership over the past year. While this represents an improvement over 2021 when 48% of organizations report membership declines, it remains an uncomfortably high number. Wild Apricot (2020) found similar trends, reporting that more than a third of all membership-based organizations are not growing or shrinking, and nearly 40% of associations, like ASEE, shrunk or did not grow. Mature organizations, defined as those more than 10 years old experienced the steepest declines in membership (Wild Apricot 2020). Membership declines are likely due to myriad reasons that are sometimes specific to an individual society and not very well-documented. Association membership professionals report that the most likely reasons for members not renewing their memberships are lack of engagement with the organization, lack of value, or that they left the field or profession (MGI 2022 and Wild Apricot 2020). Other contributing factors include a decline in employers' willingness to financially support membership in professional societies, lack of employer support for involvement in professional societies' activities, demographic shifts (e.g. younger generations are less likely to join organizations), and lack of focus on an individual's specific interests (e.g. organizations trying to be all things) (MGI 2022, Wild Apricot 2020, and Gorringer 2017).

Organizations report their biggest internal challenges in recruiting new members are difficulty communicating benefits of membership, lack of staff, and difficulty attracting and/or maintaining younger members, while external challenges include the ongoing effects of the global pandemic, declining financial support for membership from employers and members' budgets, and a competitive association environment for providing information and resources (MGI 2022). Discounts on conference registration fees and annual membership dues are the most effective offers for recruiting new members (MGI 2022). Association membership professionals believe the top reasons individuals join their association is for networking with others in their field, obtaining or maintaining continuing education or professional certification, and accessing specialized and/or current information. In the past year, 66 percent of associations reported that they saw increases in the number of members engaged in webinars and virtual professional offerings. In contrast, over 50% of associations saw declines in the number of members engaged in in-person annual conferences, trade shows, and professional development meetings (MGI 2022).

Current ASEE Civil Division Recruiting Efforts

The Civil Division of ASEE largely relies upon word of mouth and their website to recruit members. To date, there is no coordinated, centralized effort to recruit new members. Rather,

existing members often are the primary tool used to recruit members from their own institutions and networks. This approach can be effective as finding a community is a primary reason for joining professional organizations (Gorringer 2017).

Membership Trends in ASEE and ASCE

The American Society for Engineering Education (ASEE)

Membership in ASEE peaked at 27,020 members in 2008. Currently, there are 22,053 members, a decline of 18% from the peak. Membership in the Civil Division of ASEE peaked at 680 members in 2008. In 2023, the Civil Division reported 450 members, a decline of 34% from the peak. This decline is less than the decline seen in related divisions (Figure 1 and Table 1). The Civil Division is part of a Professional Interest Council (PIC). Prior to 2020, the Civil Division was in PIC 1, which experienced a decline of 29% between 2008 and 2020. Currently, the Civil Division is part of PIC IV, which experienced a decline of 21% between 2021 and 2023.

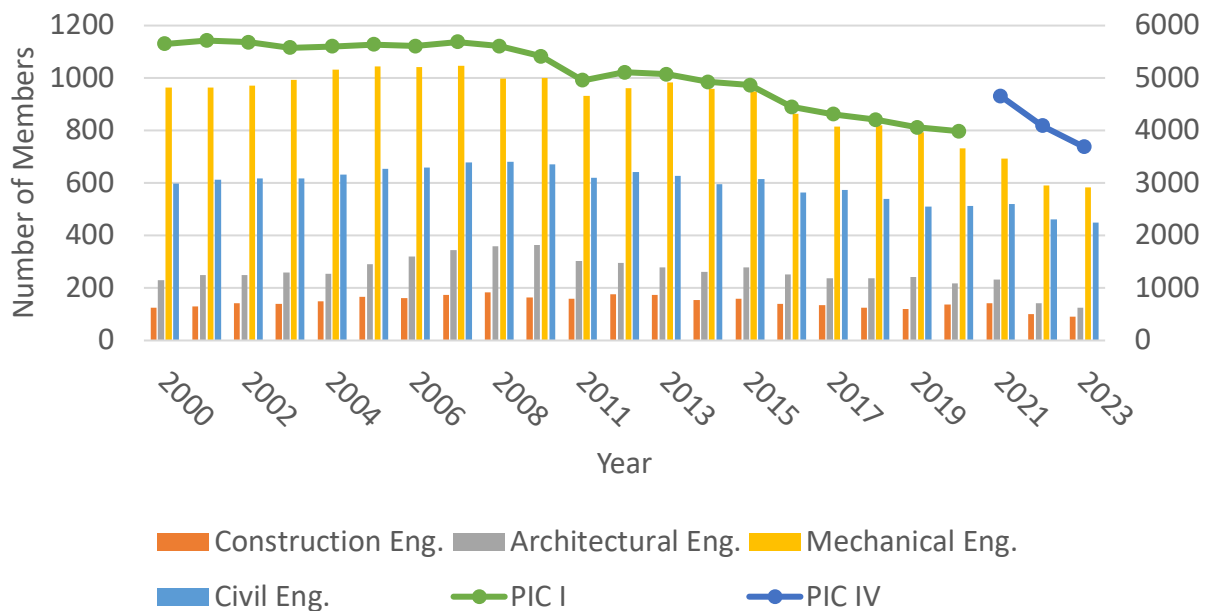


Figure 1. Division Membership for the Civil Division, Related Divisions (Construction, Architectural, and Mechanical, shown with bars), and PIC I and PIC IV (shown with lines)

The American Society of Civil Engineers (ASCE)

Membership in ASCE has experienced declines as well (Figure 2). The peak of 152,097 occurred in 2019. Since that time membership has declined to 136,063, a decline of 11% overall. However, as seen in Table 2, the changes in membership were not uniform by membership grades. Affiliate, Associate, and Honorary/Distinguished grades experienced increases over this time; while Student, Fellow, and Member grades experienced declines. Student membership experienced the sharpest decline. Much of this decline is likely attributable to the move to remote instruction that occurred at many colleges and universities in response to the pandemic; however, as the typical college-going population continues to decline it may be necessary to set a realistic target for student membership that accepts some degree of decline.

Table 1. Changes in ASEE by Membership for the Civil Division and Related Divisions (Construction, Architectural, and Mechanical) from the Civil Division Peak in 2008 to 2022, the PIC I from the Civil Division Peak in 2008 to 2020, and the PIC IV from 2021 to 2023.

Division	Members in 2008	Members in 2023	% Change
Construction Engineering	183	91	-50
Architectural Engineering	360	124	-66
Mechanical Engineering	999	583	-42
Civil Engineering	680	450	-34
	Members in 2008	Members in 2020	
PIC I	5609	3987	-29
	Members in 2021	Members in 2023	
PIC IV	4656	4093	-21

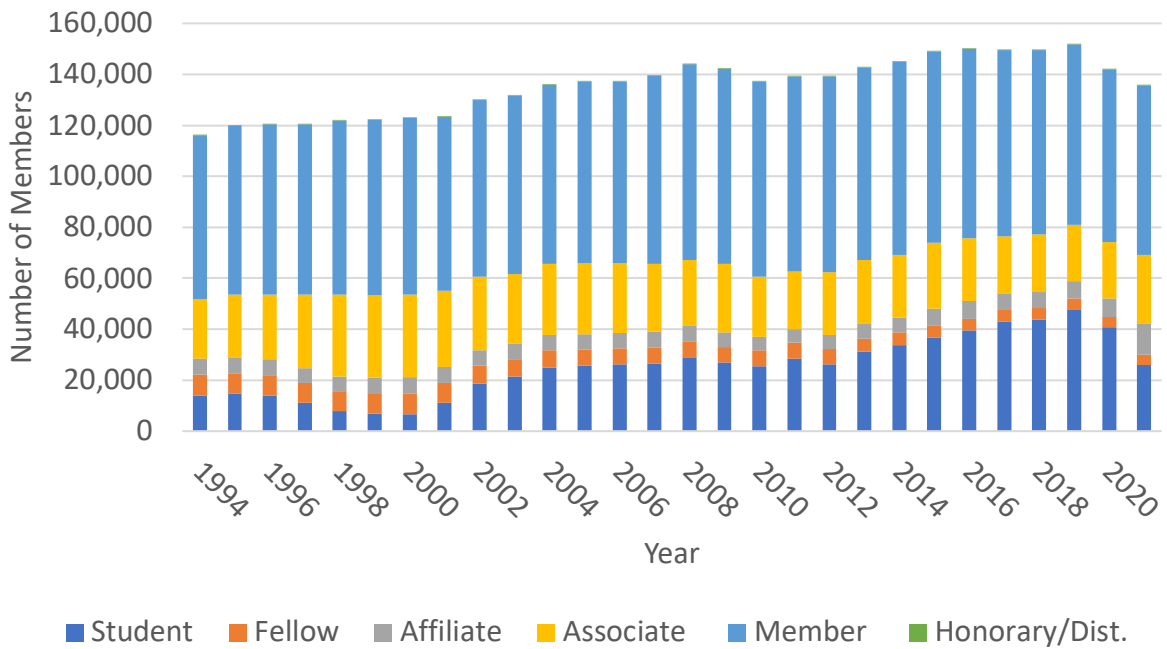


Figure 2. Membership trends for ASCE, 1994-2021

Table 2. Changes in ASCE by Membership Grade from Overall Peak in 2019 (overall peak) to 2021

Membership Grade	Members in 2019	Members in 2021	% Change
Student	47,654	25,968	-46%
Fellow	4,492	4,120	-8%
Affiliate	6,791	12,141	79%
Associate	22,053	27,045	23%
Member	70,884	66,558	-6%
Honorary/Distinguished	223	231	4%
Total	152,097	136,063	-11%

Interviews with Nonmembers, Members, and Leadership

To elucidate the current state of membership a series of interviews were conducted (Table 3). The goal of the interview process was to go deeper than the facts on membership. Each interview took between 10 and 45 minutes, with an average length of 15 minutes. IRB approval was obtained for both the recruitment and interview process. The interviewees were given a set of questions dependent upon their status as a nonmember, member, or a leader in the division. Two of the nonmembers had formerly held ASEE membership and one had never been a member. A leader was defined as an individual who either currently holds or has held an executive position. The interviewees were provided a consent document to review before the interview. All respondents consented via email and allowed the interviewer to record the interviews via Zoom. The autogenerated transcript was used to summarize the responses. Perhaps, unsurprisingly, leaders were far more likely to respond to the request for interview, thus they are overrepresented in the sample. At the time of writing 13 interviews had been conducted. Leaders were often tenured faculty from predominantly undergraduate institutions (PUIs).

Table 3. Summary Characteristics of Interviewees

	Nonmembers	Members	Leaders
	Rank		
Non-tenure track			1
Tenure track			
Tenured	3	1	6
Other		2	
	Institution Type		
Predominantly undergraduate institution	1		5
R-2	1	1	
R-1	1		2
Other		2	

Questions

Nonmembers

- Are you a member of any professional societies? Which ones?
- What would entice you to join ASEE?
- Is ASEE membership valued by your institution? How or how not?
- What could this division do to improve membership?

Members

- Can you remember how and why you initially got involved with ASEE?
- Can you remember how and why you initially got involved with the Civil Engineering Division?
- Are you a member of any other divisions in ASEE?
- Are you a member of any other professional societies? Which ones?
- Is ASEE membership valued by your institution? How or how not?
- Have you considered a leadership position? Why or why not?
- What could this division do to improve membership?

Members in leadership

- Can you remember how and why you initially got involved with ASEE?
- Can you remember how and why you initially got involved with the Civil Engineering Division?
- Are you a member of any other divisions in ASEE?
- Are you a member of any other professional societies? Which ones?
- Why have you continued to be involved in the division?
- Is ASEE membership valued by your institution? How or how not?
- Tell me about your experience as a leader in the division.
- What could this division do to improve membership?

Summary of Interviews

It is understood that the number of interviews represents a small sample size, however, consistent themes emerged from the interviews, which are summarized below. These themes are summarized below.

Involvement in ASEE

- Most interviewees were members of other ASEE divisions, but they were not active in them.
- Personal introduction was the most common entry point. Nearly all members, and especially those in leadership, described being welcomed into the division by an individual.
- Members and leaders used phrases like “I found my home,” “warm and welcoming,” and “fun” to describe the division.
- Mentoring and encouragement from leadership was the reason leaders became, and stayed, involved.
- Remaining open and welcoming to new members, including those that have different experiences, such as those that did not participate in ExCEED is important.

Involvement in other professional societies

- All interviewees were also members of ASCE.
- Most interviewees were a member of one more discipline-specific society.
- Most interviewees stated that they had reduced the number of societies to which they belong, retaining only those in which they were actively involved.

Emphasis on value

- The value that ASEE provides to its members must be clear and apparent.
- ASEE needs to remain focused on its core mission of engineering education to remain relevant. Many members perceived a lack of focus in recent years.
- The annual national conference was often described as a key touchpoint.
- The social events (e.g. RAP session and banquet) are important for recruiting and retaining members.

Barrier to entry

- The value of the yearly membership fee needs to be apparent. Some interviewees received institutional support to pay for their membership, while others did not.
- Involvement in other, more technical, societies was cited as a reason for limited involvement in the division for members and as a barrier for entry for nonmembers. Involvement in more technical societies is more valued by more research-intensive institutions.

Suggestions for improvements

- Use the newsletter and/or website to provide easy to understand and implement pedagogical improvements. Content should be created from presentations/papers from the annual conference. Many cited a lack of time to read the papers presented at the annual conference but appreciated the value of the work presented.
- Demand financial accountability of ASEE.
- Be cognizant of the experiences of potential members and do not inadvertently exclude new people from conversation; for example, do not over-emphasize ExCEED.
- Continue to use the RAP session as a recruitment tool by keeping it open to all conference attendees.

Institutional Trends

Four hundred seventy members of the Civil Division have included their name and contact information in the directory; of these 468 were able to be found through an Internet search. This directory was used to determine the number of tenured, tenure track, and non-tenured track faculty and as well as non-faculty members in the division. For US institutions, the institution type was characterized by Carnegie status as PUI, R-2 (moderate research activity), or R-1 (very high research activity).

Tenured and tenure-track faculty make up 75% of ASEE Civil Division members with the remaining 25% nearly equally split between non-tenure track faculty and non-faculty (Table 4). Most members were affiliated with R-1 institutions (37%) followed closely by PUIs (34%). Nationwide, about 24% of the more than 300 engineering programs offering a BS in Civil

Engineering are housed at PUIs and about 29% are R-1, so these types of institutions are overrepresented in the membership. PUIs are overrepresented in leadership. Seventeen percent of members were affiliated with R-2 institutions, while approximately 46% of Civil Engineering programs nationwide are R-2, thus, R-2 institutions are underrepresented in the Civil Engineering division. The remaining 12% of members are affiliated either with international universities or non-academic institutions.

Table 4. Members in Directory by Role and Institution Type

Title/Role				Institution Type			
Tenure Track	Tenured	Non-tenure Track	Non-faculty	PUI	R-2	R-1	International and non-academic
16%	59%	13%	12%	34%	17%	37%	12%

Conclusions

Professional societies across the US are seeing declines in membership and ASEE and ASCE are not immune to this cultural phenomenon. Several interviewees indicated that they had reduced the number of societies to which they belonged to those that brought value or provided leadership opportunities. This is consistent with trends reported by MGI (2022) and Gorringer (2017). Many interviewees either paid for professional memberships out-of-pocket or their employer would pay for one membership. This financial constraint has led many to rethink the breadth of professional societies to which they belonged. This change in how membership is viewed is emphasizing quality over quantity; thus, membership organizations need to determine how to continue their missions while providing excellent experiences to all members.

To ensure value, the authors recommend the following:

- Remain warm and welcoming to all who come to Civil Division sessions.
- Emphasize the value of joining the Civil Division to fully realize the teacher-scholar model for career advancement. Joining a community of engaged professionals provides leadership, networking, and recognition opportunities.
- The RAP session should continue to be used as an informal way for new members to meet existing members. This event should be nonticketed to enable potential new members to join spontaneously.
- Department Heads/Chairs are encouraged to support (including financially) ASEE membership and attendance at conferences. For example, Department Heads/Chairs should financially support ASEE membership and conference attendance on top of technical society membership and conference attendance so that faculty are not choosing between one or the other.
- The newsletter should be published more frequently and used to share condensed “take-home” messages from the papers and presentations at the national conference.

An increase in membership is likely an impossible goal, but an increase in involvement and engagement is a worthy and attainable goal.

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