Letter from the Editor

The editors of the International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship (IJSLE) are pleased to publish this, our first special edition of the Journal, entitled “**Opportunities and Barriers to Integrating Service Learning into Engineering Education**”. The editors solicited scholarly manuscripts that would explore three areas related to service learning in engineering (SL), humanitarian engineering (HE), and/or social entrepreneurship (SE) - both domestically and internationally. These three areas included:

1. Assessment of Service Learning in Engineering
2. Scholarship of Service Learning in Engineering
3. Interdisciplinary Engagement

The selected manuscripts convey a level of scholarship valued by the readership and contribute to the growing body of knowledge which seeks to advance such scholarship in the field of service learning in engineering.

As most of our readers are aware, the Journal’s primary purpose is to foster inquiry into rigorous engineering design, research and pedagogy with a focus on addressing issues experienced by marginalized communities – with entrepreneurial application as appropriate. This coming year, our ninth year of publication, IJSLE will continue to highlight and disseminate scholarly projects, programs, research and pedagogy that involve SL, HE, and SE.

Not only does the Journal seek to disseminate manuscripts related to the development of appropriate technologies for marginalized communities, it also seeks to encourage the cultural appropriateness of such technologies – and promoting the economic and environmental sustainability of such technologies.

An area of increasing interest for the Journal and its readers, as evidenced by many of the manuscripts in this Special Edition, is the scholarly exploration of the boundaries between the technical and the social aspects. This may best be accomplished by interdisciplinary collaborative research between engineers and social scientists - to investigate and deal with problems in the real world which are not discipline specific nor accepts a clear distinction between the technical and the social.

Continued scholarship in the areas of appropriate technologies development, authentic community partnerships, and pedagogy will foster and promote our shared work as a distinct body of knowledge.

A special thanks to the editors and the reviewers for this Special Edition, who, without their expertise and willingness to devote the time, the Special Edition would not have been possible.

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I join with the other editors and the reviewers of the IJSLE in hoping that you enjoy and benefit from the manuscripts in the Special Edition and that you continue to engage in the scholarly work you do in Service Learning in Engineering, Humanitarian Engineering, and Social Entrepreneurship. If you ever wish to contact me regarding the Journal and related matters, please do not hesitate.

Sincerely,

Thomas H. Colledge, PhD, PE
Editor-in-Chief, IJSLE

P.S. In an effort to provide the IJSLE editors with insight and direction in our continuing efforts to better serve this scholarly community, the editors undertook a survey prior to issuing the Call for Papers for the Special Edition (February, 2013). The survey was intended to gauge the IJSLE's actual (and potential) audience, their interests, and the practices of the scholars and practitioners engaging in SL, HE and SE. The results are summarized in the following pages.

Survey Results

A survey was distributed to the 8000 subscribers of the IJSLE. In addition, notices of the survey were distributed to the broader engineering service learning community, including: Engineering for Change (E4C), National Collegiate Innovators and Inventors Alliance (NCIIA), and others. SurveyMonkey was used in this effort. The responses were sorted into various grouping: academic faculty (assistant, associate, full), students and ‘others’. This last category (‘others’) consisted of a variety of self-identified practitioners and other parties, including: directors of programs, founders of programs, lecturers, managers, retired, postdocs, company presidents, and researchers. The breakdown is illustrated in Figure 1 below.

FIGURE 1
SURVEY PARTICIPANTS

The survey provides a snapshot of the broader community of service learning in engineering practitioners and can serve to guide the IJSLE in its on-going efforts. Perhaps not surprising, the number of assistant professors (non-tenured) is the smallest grouping identified. It has often been suggested that tenure-track faculty may not wish to engage in such work as it has historically not been recognized in the promotion and tenure process. In addition, the ‘others’ category is significantly larger than the others, followed closely by the student component. One of the goals the editors have is to seek to expand the participation of both tenure track and tenured faculty in research and design efforts in these areas.

The faculty respondents were separated from the non-faculty respondents. The self-identified faculty participation results are shown in Figure 2 and Figure 3 below:

**FIGURE 2
FACULTY RESPONDENTS**

**FIGURE 3
FACULTY RESPONDENTS REPORTING THE TYPE OF WORK THEY ENGAGE IN**

Faculty was requested to identify the area in which they work: service learning in engineering (SL), humanitarian engineering (HE), or technology-based social entrepreneurship (SE). It is seen in both figures that faculty most commonly identified themselves as participating in service learning in engineering, as opposed to humanitarian engineering, or technology-based social entrepreneurship. 66% of faculty self-identified themselves as working in an area related to SL (SL, SL and HE, SL and SE, or SL and HE and SE). A smaller number self-identified as working in SE. This again points to the fragmentation of this field of study in terms of the names it goes by. Others include: community service engineering, service engineering, learning through service, social engineering, frugal engineering, and among many others.

From the student perspective, similar results were had, although the students did not list multiple areas of participation (SL, HE, SE) as did the faculty respondents. See Figure 4.

**FIGURE 4
STUDENT RESPONDENTS**

In examining the publication practices of the faculty who **do participate** in the areas of SL, HE or SE, it is seen in Figure 5 that assistant professors published slightly more often than tenured faculty. In all cases, however, more faculty in each category did **not** publish their work related to SL, HE or SE than did.

**FIGURE 5
FACULTY RESPONSES TO WHETHER THEY PUBLISH IN SL, HE AND/OR SE JOURNALS**

For the faculty that does publish in the areas of SL, HE and/or SE they self-identified the areas in which they publish as shown in Figure 6.

FIGURE 6
RESPONDENTS WHO HAVE PUBLISHED IN SL, HE AND/OR SE

Faculty reported the types of publications most useful to them as readers of publications as follows: a) successful projects (case studies), b) pedagogical approaches, and c) program evaluations. See Figure 7.

FIGURE 7
TYPES OF PUBLICATIONS OF MOST BENEFIT TO FACULTY

When faculty published their own work in these areas, they reported (Figure 8) that they focused on three areas in particular: a) design project results (case studies), b) program descriptions, and c) pedagogy. These areas are obviously of importance for the Journal in that it has promoted the submission of such topics. It is interesting to note that the theoretical research category was a distant fourth for the authors. This may have implications for a stated goal of IJSLE to facilitate a more rigorous, research oriented model for the Journal.

FIGURE 8
TYPES OF PAPERS FACULTY SEEK TO PUBLISH

Attempting to ascertain why faculty did not publish more in areas such as SL, HE and/or SE, it is informative to see the results in Figure 9. Lack of Time was the dominant reason for not publishing, followed very closely by No Perceived Value (particularly in the P&T process). A third reason listed was a Lack of Quality Journals.

FIGURE 9
OBSTACLES TO PUBLISHING IN SL, HE AND/OR SE

Figure 10 illustrates the percent of publication efforts in which faculty included students in the process. For example, for Undergraduate students (in blue), about 37% of faculty stated that they include students in their work less than 20% of the time, 31% of faculty include students 20-50% of the time, 6% of faculty include students 51-75% of the time, and 26% of faculty include students 76-100% of the time.

FIGURE 10
RESPONDENTS WHO ENGAGE STUDENTS IN PUBLICATION EFFORTS

Lastly, the survey results indicated that readers are interested in two fundamentally different types of journals: a) a rigorous journal dedicated to research into technology, pedagogy and descriptions of programs, and b) a ‘less rigorous’ journal dedicated to the communities themselves; that is, something which the communities might access and assist in the implementation of the technologies discussed. These results are shown in Figure 11 below.

FIGURE 11
RESPONDENTS INTERESTED IN A “RIGOROUS” VERSUS A “LESS RIGOROUS FOR DISSEMINATION TO COMMUNITIES” JOURNAL

Take-Aways from the Survey (Action Items)

1. 40% of the respondents in the survey were faculty (tenured and tenure-track) while 60% were either 'others' or students. Continued marketing of the journal to faculty, along with promotion of the benefits of the journal, needs to be not only continued, but intensified.
2. Of the faculty who responded to the survey (assistant, associate and full professors), there was a fair amount of consistency across the ranks in terms of their **self-identified area(s) of interest**. SL was identified by most as their area of interest, followed by HE, with SE significantly lower.
3. For faculty that publishes, the trend in terms of areas of **self-identified areas of publication**, were again: SL followed by HE and then SE.
4. Each of these last two items point to the fact that naming/branding issues related to the broader field of study continue to fragment the promotion of the broader effort. Though most identified their efforts as pertaining to service learning in engineering, the breadth of responses indicates naming issues remain significant.
5. As expected, non-tenure track faculty had a significant drop-off in terms of publications in these areas. Providing valued, scholarly publication outlets is essential for scholars in this field of study.
6. The engagement in technology-based social entrepreneurship was higher among non-tenured track, tenure-track faculty, and students - relative to full professors. This may indicate a growing awareness, and acceptance of, SE as a pedagogy which demonstrates future potential for SE - with its emphasis on the need for integrating the economic, political, cultural contexts of engagement with the technical components.
7. It is difficult to address issues related to what the respondents described as their number one issue for not publishing: a 'Lack of Time'. However, the 'No Perceived Value' (particularly related to the P&T process) is an area which needs addressed by the entire SL, HE, SE community. As more and more faculty engage in these areas, they will populate more and more P&T committees. It may be that the recognition of the value of this type of work needs to be built from the ground up. Part of that effort is what the IJSLE attempts to provide – a forum for demonstration of scholarship for practitioners. 'Lack of Quality Journals' is obviously a direct challenge for IJSLE – to elevate the academic rigor and scholarship of the Journal to alleviate this concern.
8. The IJSLE is currently satisfying the identified demand for a platform for disseminating manuscripts detailing: projects (case studies), programs and pedagogical approaches. However, beyond these three areas, survey results were at odds somewhat. In response to the question: 'What types of publications are most beneficial to you?', the options of 'theoretical research' and 'going to market' received the lowest scores. But when the question was posed: 'Would you have an interest in a more 'Rigorous Research Journal' or 'Less Rigorous Journal for Dissemination to Communities', significant numbers of faculty listed both were of interest. It is of interest that assistant professors indicated

‘rigorous research’ of importance, while tenured faculty indicated that ‘dissemination to communities’ was of greater importance. The IJSLE editors will begin highlighting distinct categories within the Journal to address these specific areas of engagement.