

System Dynamics Review

Papers of Practice

Papers of practice demonstrate the breadth of ways in which people are applying system dynamics and its constituent tools and techniques in diverse organizational, educational, and societal settings. They provide information about the state of practice in the field and introduce innovations and adaptations that have been employed with different degrees of success. As such, they serve as a knowledge repository of current practice which can be used by practitioners to tailor their own offerings and by researchers to evaluate the contributions of the different approaches and adaptations.

Focus

Papers of practice are welcome in all areas where system dynamics or its constituent tools and techniques are being applied, whether to solve specific problems or develop the problem-solving skills of others. Papers should clearly articulate the problem, opportunity, or objective of the application and show the way in which the work helped, or intended to help, in addressing the problem. What was done should be described in a way that is clear to other practitioners. Applications need to use the tools and technique of system dynamics, but need not represent complete model development and analysis. Skill building activities can include curricular material, workshop designs, and exercise descriptions used in formal educational settings, skill development for professionals, community outreach, or other learning environments.

Papers of practice are intended to be of value to those who are also doing or intending to do hands-on work. As such, papers should focus on the practical aspects of the work done, include the information necessary for readers with the requisite background to perform similar work, and include reflections on the experience that would be useful to others considering similar work.

Demonstration of Value

The intent of these papers is to keep people in the field apprised of what is being tried, what works, what does not, and why. Value in this context does not equate to success. There is much to be learned from work that failed to achieve its objectives and reflections on why, as this can help others avoid pitfalls.

To the extent that any work is repeated in different contexts or with different groups of participants it is useful to report the results in each case. Measures of success should be reported, whether these are anecdotal or formally collected data. It is recognized that much of current practice is done in settings where formal data collection and evaluation is not part of the process. As such, reporting on outcomes as observed by the authors and any other stakeholders should be included to help provide context.

In all cases reflection on the work being described is critical. Discussing the ways that the setting in which the work was performed contributed to (or detracted from) success can help others better understand where the work might be effectively used. Realized outcomes that are a surprise, essentially

side effects, should also be brought to the readers' attention and discussed. Work of this type will help in building a strong community of practice and can also form a basis for rigorous academic research.

Nature of Citations

Papers of practice should be practically grounded and do not require a comprehensive literature review. However, the material presented should clearly indicate the base of knowledge on which it was built. In many cases this may be a small number of textbooks or articles. Techniques and procedures developed by others should be appropriately credited. Literature used in support of reflections, even when referenced after completion of the work, should be included. Novelty of approach is not a prerequisite for publication, as these articles also build the body of knowledge around applying similar techniques in different practical settings.

For papers that deal with a substantive issue in a specific problem domain, such as transportation or public health, citations that put the work in context should be included. Citations that are approachable by those without domain expertise are the most valuable.

Format Expectations

Submissions should be concise, but complete, and approximately 3,000 to 5,000 words in length.

Interventions intended to understand a dynamic phenomenon or to inform or guide the decisions of stakeholders should lay out clearly what has been done, for whom, and with what effect. There is an example template for these papers. Papers of Practice should include as many of the following topics as possible:

- Problem articulation or objective of the intervention.
- Existing approaches to dealing with the problem that would have been used had no intervention occurred.
- A description of the process used in the work being described.
- Key artifacts (models, diagrams, pictures) used in the process that help describe what was done.
- Recommendations or insights delivered.
- The actions taken by stakeholders after the intervention contrasted with the momentum policies.
- Reflections on what worked and what didn't, any key insights about the practice and suggested revisions to the approach.
- Recommendations/suggestions for other practitioners who might be interested in applying a similar approach..

Work that is educational in nature should describe the learning objectives, what was done to achieve them, and include the content needed to replicate the work. There is an example template for these papers, and they should include as many as possible of:

- A description of the learning objective, target audience, and any specific skills being developed.
- Sufficient grounding in previous work done in this area and discussion of how this approach extends or differs from previous work.

- Description of the educational approach used in sufficient detail that other practitioners could repeat it. Specific details or curriculum materials may be included in appendices or supplementary material.
- Outcome measures that indicate whether and how well the learning objectives were achieved. In contrast to the assessments required for a research article, outcome measures for papers of practice may include observations or participant reactions that are not part of a rigorous research design.
- Reflections on what worked and what did not, any key insights into best practice and suggested revisions to the approach.
- Recommendations/suggestions for other practitioners who might be interested in applying a similar approach.

Review Process

The review process follows the standard process for research articles but with different review criteria as described below.

Everything submitted for review should also be available in the final publication. Confidential or sensitive information not appropriate for publication should not be included in submissions. When data and descriptions have been modified to protect confidential information, a statement to that effect should be included in the submitted material.

Review Criteria

Papers submitted in this category will be valued based on:

- **Relevance** Does the paper demonstrate a legitimate use of one or more of the tools and techniques of system dynamics and systems thinking?
- **Novelty or Valuation** Does the paper: 1) demonstrate a novel use of techniques based on application domain, target audience, or formulations; or 2) provide distinct evidence around what is effective and what is not for commonly use techniques?
- **Completeness** Does the paper (and any supporting materials) make clear what was done and when it was done (while protecting confidential information as needed)?
- **Context** Is there sufficient relevant reflection to understand the settings in which the work described could flourish or might flounder?
- **Clarity** Is the paper sufficiently well organized and written to be clearly understood?
- **Grounding** Is the work clearly grounded in the practice of system dynamics?
- **Generalizability** Have the authors reflected on the circumstances under which the work could be applied in other settings?