

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 1998 Proceedings

Americas Conference on Information Systems
(AMCIS)

December 1998

Teamwork and Information System Development Effectiveness

Kenneth Trimmer
University of South Florida

Follow this and additional works at: <http://aisel.aisnet.org/amcis1998>

Recommended Citation

Trimmer, Kenneth, "Teamwork and Information System Development Effectiveness" (1998). *AMCIS 1998 Proceedings*. 426.
<http://aisel.aisnet.org/amcis1998/426>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 1998 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Teamwork and Information System Development Effectiveness

Ken Trimmer

University of South Florida

The natural organizational form for information systems development (ISD) is the team. One strategy for success in ISD has been to have users involved throughout the systems development cycle in cross-functional teams, in order to achieve an end product more satisfactory to these stakeholders. The effectiveness of these cross-functional information systems development teams (ISDT) in this process is the subject of this research.

Drawing from the effectiveness models of McGrath, Hackman, Gladstein, and other small group researchers, a team effectiveness model is developed. This model is then evaluated within the context of ISD. The model takes the form of an input-process-output (IPO) archetype. The process is looked at as it relates to the interpersonal relationships formed between the members of the ISDT. This process is defined as teamwork, which is the subject of the basic research question. Positive teamwork is hypothesized to improve the effectiveness of ISD. Because the concept of teamwork contains multiple factors, this research also investigates the hypothesis along multiple dimensions, including those of interpersonal and team development.

The interpersonal dimensions of teamwork proposed by Stevens and Campion form the basis of the ISD teamwork model. These include communication, collaborative problem solving and conflict resolution. Importance of these in IS research has been shown by White and Leifer (communications), DeSanctis and Gallupe (decision making) and Robey (conflict resolution). In addition to these dimensions, other variables suggested by IS researchers are considered.

A set of effectiveness variables drawn from Robey's research and other MIS literature regarding ISD deliverables is supplemented by the measurement of team viability. Team viability, the capability of team members to work together in the future, is one of Hackman's measures of effectiveness and is considered to be a measure of team development. Viability is also measured by individual withdrawal behavior which can eventually lead to turnover. Strong team viability should improve ISD in the long run, an issue that has long concerned IS researchers and managers.

Because teams operate in an organizational context, conditions imposed upon and resources allocated to the team are components of variables conditioned by the nature of the ISD deliverable. As such, the team is totally dependent upon the resources committed to the task, and the environment it must eventually reside in. One measure of this is the level of human resource information systems (HRIS) in place. Existence of an HRIS should enable the organization to better staff their ISD teams. Properly formed teams have been shown to respond well to most negative conditions imposed on the team, whereas poorly formed ones succumb to negative events.

This research will enlist a survey as its methodology. ISD project team leaders, and team members, both IS professional and users will be the respondents to the survey. This strategy has been employed in previous IS research. In addition, responses from stakeholders not members of the team will be obtained to assess system satisfaction, a measure of effectiveness. The research will not be restricted to one team per organization. Relationships between variables will be analyzed with regression techniques, factor analysis and a path analytic model.

This research will contribute to IS research by studying the components of teamwork in the systems development context. For researchers, this will further investigate the "black box" of the systems development process. For practitioners, it will allow them to focus resources for improving the ISD team.

One of the potential limitations to this study will be its generalizability. Respondents will be obtained from one region of the country. Because of the design, multiple respondents from individual ISD teams are required to enable data analysis. Inadequate sample size along any of the respondent dimensions will limit the ability to analyze the data. In addition, much of the information provided by respondents will be in the form of self-reports.