

An Empirical Investigation of Two Group Idea Generation Techniques: Manual vs. Electronic Gallery Writing

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ABSTRACT

Gallery writing is a widely used variant of brainwriting and the technique is available in electronic and manual forms. This study posits a model based on the input-process-output framework to empirically test the relative efficacy of electronic and manual gallery writing. An experiment using a student sample was conducted and data were collected to test the proposed model. Path analysis shows that while either technique can be used successfully, groups using the electronic version generated more text. Also, free riders were dissatisfied with the meeting process. Some implications of this study are that when a large number of ideas are desired in group meetings, electronic gallery writing might be the preferred technique, while manual gallery writing might be better when meeting participants want to keep the discussion focused on succinct ideas.

Keywords: Brainwriting, Electronic Gallery Writing, Electronic Meetings, Gallery Writing, Group Idea Generation, Manual Gallery Writing

INTRODUCTION

Spending on meetings in the United States (US) reached over US \$263 billion in 2009 (Davis, 2011), and on average, 25 million meetings take place in corporate America every day. According to some estimates, over 50% of the time spent in these discussions is unproductive (Moncrief, 2011). Consequently, for several decades, researchers have sought ways to make meetings more effective.

Some studies of meetings in the past have highlighted the superiority of brainwriting (a group of techniques characterized by the silent and simultaneous exchange of written or typed comments) over the more traditional practice of generating ideas orally. One of these text-based methods, poolwriting, involves swapping papers or electronic files, and the computerized form was used often in early experiments with electronic meeting systems (Gallupe et al., 1998). Results of studies using electronic

DOI: 10.4018/jec.2013040103

poolwriting showed that group members saved up to 56% of their labor costs (Grohowski et al., 1990) and up to 71% of their overall project time (Martz et al., 1992). As an example, IBM saved US \$4 million a month using these electronic meetings to conduct business (IBM, 2008).

Some research has shown that another form of brainwriting called gallery writing is superior to poolwriting and oral brainstorming (Aiken & Vanjani, 2003). Using manual gallery writing (MGW), group members write comments on sheets of paper on a wall and are thus able to view all of the text at the same time (unlike with poolwriting). In addition, the electronic and manual versions of gallery writing are used more often than those for poolwriting. Computer chat rooms and bulletin boards are based upon electronic gallery writing (EGW), and numerous organizations such as Apple, Microsoft, AT&T, General Electric, NASA, McDonalds, PepsiCo, and Proctor & Gamble have used MGW to record ideas in meetings (Fredman, 2008). In addition, this technique has been used to facilitate multilingual group communication (Aiken et al., 2011). The characteristics of each technique are summarized in Table 1.

Although gallery writing has been used extensively, relatively little research has been conducted on detailed comparisons between MGW and EGW, and small differences in the features of apparently similar tools could affect usage patterns (Markus, 2005). In this paper, we look at the roles of several process losses including production blocking, evaluation apprehension, and free riding in the manual and electronic versions of gallery writing meetings. First, we discuss our theoretical model and then

present the results of an experiment comparing the two methods. The paper concludes with implications for practice and research.

THEORETICAL MODEL AND HYPOTHESES DEVELOPMENT

The theoretical model shown in Figure 1 borrows from the input-process-output (IPO) framework that has been the basis of much research into the productivity of teams (Ilgen et al., 2005).

The model posits that the success of a meeting (e.g., meeting satisfaction and the number of relevant comments generated) is determined by the technique employed (MGW or EGW), but this productivity is mitigated by process losses such as production blocking, evaluation apprehension, and free riding (Dennis et al., 2005; Rittgen, 2009).

The underlying assumption of this model is that group productivity is a function of the resources available to a group. For example, a group of skilled members (those having appropriate knowledge, skills, and motivation) will on an average be more effective than a group with less qualified members. Just as a group will be more effective if they have qualified personnel, it is obvious that the group will also be more effective if they have the appropriate technology to support group activities. Also, prior research (e.g., Potter & Balthazard, 2004) has focused principally on these constructs to analyze group productivity.

Table 1. MGW and EGW Features Comparison

MGW	EGW
Meeting participants write comments on sheets of paper on a wall.	Meeting participants type comments on computers connected in a network.
Meeting participants can submit new and view all public comments at any time.	Meeting participants can submit new and view all public comments at any time.
Comments can be linked to each individual as they are not anonymous.	It is difficult to link comments to each individual as they are anonymous.

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