Electronic Brainstorming

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Electronic Brainstorming is a computer-aided, facilitated, group problem-solving process which the University of Alabama at Birmingham Center for Labor Education and Research (UAB-CLEAR) has used effectively in worker training. Like traditional brainstorming, electronic brainstorming can be helpful in:

- encouraging open discussion of issues on which students have different viewpoints

- assuring that all students actively participate in the learning process

- linking training to students' existing knowledge

- teaching students critical thinking/decision-making skills

Electronic Brainstorming is UAB-CLEAR's unique use of Ventana Corporation's Group Decision Support Systems V meeting software. The computer software overcomes some of the negative aspects of pen-and-paper brainstorming as a training method.

Electronic Brainstorming takes place in a room at the University of Alabama at Birmingham containing a dozen networked computers arranged in a U-shape and connected through a server to a large public screen. Participants work at individual computers, guided by a facilitator and a technographer. Because Electronic Brainstorming participants are in the same room at the same time, they do not surrender their non-computer communication skills in an Electronic Brainstorming session, they augment them.

The facilitator helps to keep verbal discussions on track, while the technographer guides the group in using the computer technology to record, review, revise, and rank responses. Jointly, the facilitator and the technographer lead participants through the processes of idea generation, commenting on ideas, ranking ideas/voting, and generating a written report.

Participants compose and edit their work on their own private screens. Anonymous participation combats the evaluation apprehension which causes some individuals to be silent in verbal group brainstorming sessions. Privacy screens mounted on each terminal prohibit participants from reading their neighbors' computer screens. Submitting an idea to the group from your private screen requires a single keystroke. The technographer collects several ideas, then posts them to the public screen. The ideas appear on the public screen, with no reference to which participant suggested which idea.

The technology can also be used to combine and annotate responses. Participants must respond directly to the ideas, not to the person who suggested an idea. The facilitator guides participants in culling the responses—combining identical responses, clarifying fine shades of meaning, and eventually ranking items in order of importance. The computer technology provides instant statistical analysis of the group's ranking of items. Individual participants can compare their personal votes to the group average and determine how closely they agree or disagree with their colleagues.

Because participants can respond simultaneously, they can cover a great deal of information in a short time. Simultaneous input overcomes production blocking- the forgotten inspiration of those who wait their turn, then forget what they were going to say or find that it is no longer relevant.

Electronic Brainstorming technology instantly records all responses sent to the public screen. Deciding which comments are worthy of note is not subject to the bias of the facilitator or the recording secretary; they appear in the exact words of the participants who typed them. When a group finishes Electronic Brainstorming, the complete record can be printed immediately.

UAB-CLEAR has used Electronic Brainstorming successfully to train workers on several labor-management topics including joint health and safety committees, employee assistance programs, and avoiding workplace violence. It has also been piloted in a hazardous materials update course where participants used Electronic Brainstorming to work through an incident response scenario using the DECIDE process.