

TRIAGE: A new group technique gaining recognition in evaluation

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TRIAGE, or *T*echnique for *R*esearch of *I*nformation by *A*nimation of a *G*roup of *E*xperts, is an inductive and structured method for collecting information that aims to obtain a group consensus. The goal of this technique is to provide quality informative material quickly and efficiently to enable decision-making or to develop more sophisticated survey tools. TRIAGE both distinguishes itself from, and complements, the main group techniques used in evaluation up until now. These are the Delphi technique, the Nominal Group Technique (NGT) and the focus group (Delbecq, Van de Ven & Gustafson, 1975).

The definition, the context for use as well as the different parts of the usual process of TRIAGE technique (recruiting of participants, individual production phase, collective production phase with visual support, validation of results) will firstly be presented then compared to these advocated in the Delphi, NGT and focus group techniques.

Also, examples of TRIAGE being applied in different evaluation contexts, such as the development of measurement instruments and the evaluation of health programs, will be presented. These examples will illustrate the richness, the flexibility and the potential of this technique as an assessment tool. Finally, the strengths and shortcomings of TRIAGE will be discussed.

Introduction

The study of new evaluation methods is necessary for the scientific advancement of the field of program evaluation (Stufflebeam 2001). In fact, evaluators must remain on the cutting edge of alternative methods, testing their strengths and weaknesses, thus enabling these techniques to be included in their evaluation procedures. These methodological innovations will allow the development of more personalised protocols and procedures, which are better adapted to the reality of the program to be studied (Stufflebeam 2001). Currently, several data collection methods based on group dynamics are in use. The *T*echnique for *R*esearch of *I*nformation by *A*nimation of a *G*roup of *E*xperts (TRIAGE) (Plante & Côté 1993) is one of the lesser known methods though it has shown great promise. It is the opinion of the authors that TRIAGE represents an answer or more precisely a complement to the Delphi technique, the Nominal Group Technique (NGT) and

to the focus group (Delbecq, Van de Ven & Gustafson 1975; Morgan & Krueger 1998). Principally developed in a French-speaking environment in the context of education, this technique is being used more and more in program evaluation processes in the health care field. This article will attempt to define TRIAGE while drawing comparisons to similar techniques such as Delphi, NGT and the focus group techniques. Subsequently, in order to demonstrate the adaptability potential of TRIAGE to different contexts, examples of the use of TRIAGE for evaluation purposes will be presented. Strengths and weaknesses of TRIAGE will finally be discussed.

Definition

TRIAGE is a research technique based on the attainment of a group consensus. It is a structured and inductive method of data collection comprised of a series of formal, successive steps (Gervais, P  pin & Carri  re 2000). TRIAGE rests on the constructivist paradigm of social research. Therefore, it assumes a relativist ontology by considering that there are multiple realities to one situation, these realities being congruent with each individual's perspective and personal knowledge of a given situation. Moreover, TRIAGE is rooted in a subjectivist and naturalistic epistemology where 'knower and subject create understanding ... in the natural world' (Denzin & Lincoln 1994, p. 14).

TRIAGE is made up of three different steps. The first step is one of preparation, followed by one of individual production. The final step, the interactive production phase, consists of a group session based on participant interaction and accompanied by important visual support. The objective of TRIAGE is to supply, in a quick and efficient manner, first-hand information for decision-making and for the development of more sophisticated evaluation tools.

Procedures

As is the case for Delphi, the NGT and focus group, TRIAGE starts with a preparation phase. In this step, evaluators pay particular attention to the meaning, the terminology and the format of the evaluation question, which will be subsequently validated (Plante & C  t   1993). For example, this question could be, 'What are the best indicators to evaluate program X?'; 'What are the principal targets for improvement in program Y?'; 'What needs should be met by a program designed for a particular clientele?'. Also involved in this step is the recruitment of the individuals who will form the group of experts. Such a group consists of 6–12 participants who must be representative of the field being studied. They should be recognised by their colleagues for their credibility, their competence and their ability to provide valid information. This notion of key informant is reminiscent of those used in the NGT and in focus group but differs from the one used in the Delphi technique in which the participant must be an expert in the content,

recognised for competence as well as experience in the field being studied.

It is important to note that a single data collection procedure can include several groups of experts, hence providing different, complementary perspectives on one issue. For example, it is conceivable to find a group of experts comprised of clients benefiting from a particular service, another group containing those involved in providing the services or even representatives from the management team in charge of overseeing service delivery. Finally, the preparation phase serves to produce documents which will be transmitted to participants, containing among other items, the evaluation question, definitions of key concepts, as well as a description of the TRIAGE procedures.

The following step is known as the *individual production*. It begins once the participants have received the mailed documents. During this phase, the participants must provide a maximum of five statements to the question. It has been shown that beyond five statements, information tends to become redundant. Plante and C  t   (1993) called these statements 'indicators'. Once identified, the indicators are written on the answer sheet and sent back to the evaluation team. In certain specific contexts, these indicators could be called issues or needs. At this stage, TRIAGE resembles the Delphi technique. Both techniques involve personal reflection and the use of questionnaires to start the data collection process. However, the similarities end here. In TRIAGE, once the evaluators have received the completed answer sheets, they compile, number and transcribe each indicator on to a different card. This process is called the construction of the 'dynamic memory' (Plante & C  t   1993). This expression is used because all indicators will remain stored away until the later period of dynamic and interactive production. It should be emphasized that during this step, no indicators are modified or analysed.

The participants don't know the identity of the other members forming the group of experts. They know that they have been selected along with other people based on specific criteria and that they are believed to be expert in their field. The authors believe that being unaware of the identities of the other members of the group of experts contributes to eliminating the risks of bias or 'self-censorship'. Also, one must not forget that the answers given in the individual phase and used during the group process remain confidential.

Once this step is completed, the group of experts is brought together for a period of *interactive production*. In this step of the process, participants are called on to identify, by consensus, the most important and relevant indicators to the evaluation question among those brought forth in individual production. This step relies on the fact that interaction between participants evolves according to a pre-established procedure and that it is facilitated by a group leader who is competent in group dynamics and group management. This step

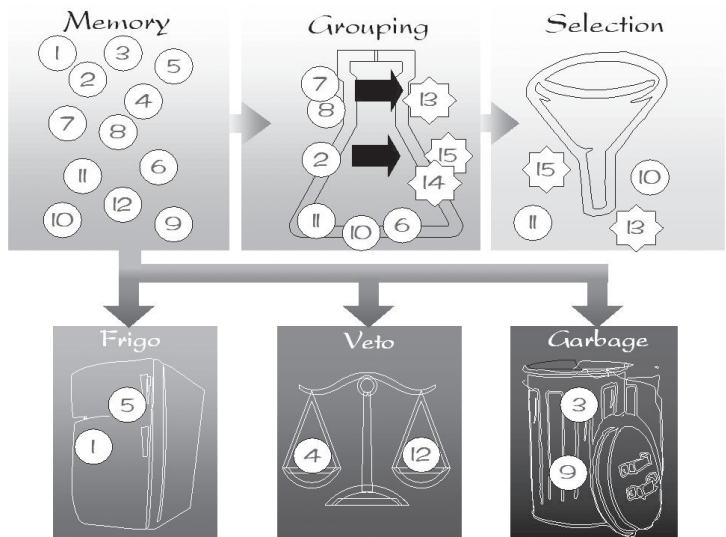
requires that the participants be willing to submit to a structured process in order to attain the desired consensus, they must be objective with respect to their own ideas and those of others, respectful of opinions expressed by others and relentless in their pursuit of a consensus (Plante & Côté 1993). The animator of the group session must act as a facilitator and draw out reactions, maintain a balance regarding the input of each participant, remain neutral about ideas proposed and be able to elucidate key elements from interactions and discussions. (Plante 2001). At this stage, TRIAGE resembles the focus group technique in that exchanges between participants are essential and valued and differs from the NGT where exchanges pass exclusively through the control of the group leader and from the Delphi technique where there are no exchanges at all between participants. Also, information gathered with TRIAGE is immediately validated through group interactions, thus avoiding verbatim transcription and content analysis as is necessary with information gathered from a focus group. The interactive process of TRIAGE relies heavily on a prominent visual aid. A wall of the room is used and divided into three main sections: *memory*, *groupings* and *selection* as indicated in Figure 1. The memory section is, in fact, a bank of all indicators gathered in the previous step, which have been numbered and transcribed by the evaluator. As group interactions help the selection process evolve, cards are moved from one section to another, from left (memory) to right (selection).

Once the group leader confirms that all participants understand the meaning of each indicator, the discussion begins. The indicators which have been retained for their relevance are transferred to the *groupings* section. If, for whatever reason, participants agree that a particular indicator should be eliminated, it goes directly to the *garbage bin*, another visual aid. Next, the indicators which have been transferred to the *groupings* section are discussed. Those which have a similar significance are grouped together and conserve the most accurate title or a new, more appropriate one (Gervais, Pépin & Carrière 2000). Similarly, if an indicator contains more than one idea, it is divided up and renamed so that each only contains one concept. Finally, the discussion may lead to the proposal of new indicators by the participants.

If too much uncertainty surrounds certain indicators, they are temporarily removed from the process to be further examined at a later time. Plante and Côté (1993) consider that these indicators have been 'stored' and kept for later use. Gervais (1996) used the analogy of a *refrigerator* where the indicators are kept fresh to be reused later. If, after a second examination, a consensus is still not obtained, the indicators can be placed in a fifth section, the *veto*. Later, these indicators are submitted to external, recognised experts who are familiar with the TRIAGE technique who will pass judgement on the pertinence of these indicators

considering the evaluation question being studied. This alternative is rarely used however, the participants usually being successful in agreeing on the value of indicators. This removal of indicators to the refrigerator or to the veto sections allow the animator to reduce group tension and continue working while avoiding a deadlock.

FIGURE 1: INTERACTIVE PROCESS OF TRIAGE



Finally, the most relevant indicators are placed in the *selection* section. This is the final choice of the participants. According to the needs of the study, the indicators can then be organised in order of priority. In this way, the group members have worked by successive approximations leading to a consensus on the best indicators with respect to the evaluation question. This group of statements can be considered credible and valid and can be used in subsequent steps of the evaluative process. At this stage, TRIAGE is reminiscent of the NGT in its relative quickness in producing results but differs from the Delphi and focus group techniques for which additional complex analyses must be performed before obtaining significant results.

Inherent strengths and weaknesses of TRIAGE

As with all data collection tools, TRIAGE has its advantages as well as its weaknesses. Regarding the strengths of TRIAGE, it must be mentioned that this technique can be used with small or large groups of participants. Experiments conducted to date have involved managing TRIAGE groups of five to over 40 participants. TRIAGE can also allow the simultaneous exploration of several facets of the phenomenon to be studied, therefore enabling the study of subjects of varying complexities. In addition, TRIAGE can be adapted to different

contexts, ranging from the construction of a measurement tool to the formal evaluation of a program.

Another strength of TRIAGE is the rapid and continued implication of the participants in the information selection process. These individuals quickly feel like an integral part of the process, interact easily and are concerned about the consensus to be obtained. The recognition of the participants as experts in their field of expertise and the importance of their continuous implication ensure that TRIAGE is a technique that can fit the Participatory Action Research theoretical basis as well as any other research processes where giving voice and empowering the participants is necessary. As a matter of fact, many participants have spoken about reflection on their practice brought on by their participation in TRIAGE. This has facilitated reflective practice.

Moreover, the visual aids provided by TRIAGE allow participants to situate themselves with respect to the task at hand and offer at any moment the possibility of confirming or readjusting choices made to date. Another advantage resides in the fact that the information obtained in the individual production phase is validated in the interactive production (Plante 2001). Furthermore, the exchanges allow the group to explore and enrich the discussions and to take into account relevant political, social and historical contexts. To sum up, TRIAGE is economical, quick, requires little material and produces data which are immediately usable. Finally, it is noteworthy that TRIAGE can easily be exported to the field of traditional research and can respond to the data collection needs of a research question.

TRIAGE presents, however, five main limits. First, the quality of the information obtained is directly related to the competence, the representativeness and the credibility of the participants, and to their ability to express themselves in a group situation. The choice of these participants is therefore of paramount importance. It must be carried out rigorously and based on well-defined selection criteria. Also, the animator is a key factor in the success of TRIAGE. Creating favourable contact with all participants and putting in place a climate of confidence favouring the expression of ideas and exchange are necessary in leading a group. Capacity to manage group dynamics, to make sure that all participants are involved, while stimulating discussion, managing conflicts and controlling and avoiding sterile debate are other important characteristics of a good group leader (Gervais, Pépin & Carrière 2000). Furthermore, one must be wary of the span of the themes to be covered in a single TRIAGE session. Wishing to cover too many elements at one time is likely to discourage participants, prolong the collective production phase and jeopardise the quality of ensuing results. In addition, it can be difficult for participants to maintain an adequate concentration level throughout the entire *interactive*

production process. Despite the fact that discussions are often stimulating and tend to generate new ideas, one must consider that such a process can nevertheless be tiring. Experiences conducted to date with TRIAGE have shown that a group meeting lasting no more than three hours ensures the quality of the experts' participation. Finally, it is important to bear in mind that results from TRIAGE are only applicable to the context of the study, there is only local validity to speak of. This being said, if the users keep in mind these limits and put in place strategies to counter them, TRIAGE remains an effective technique which is promising and complementary to other recognized data collection techniques.

Examples of applications of TRIAGE

TRIAGE has been used in a diversity of settings and contexts with a variable number of participants. Some examples will now be presented. The TRIAGE technique has been used in the context of a study employing a participative and a pluralist approach aiming to identify the best indicators of effectiveness for each of the five dimensions of a program, as conceptualised by Gervais (Gervais 1998; Gervais, Plante & Jeanrie 1999). In this study, 53 participants divided into six groups were then recruited. The selection of indicators was a crucial step in this process in that the team had to respect the values and interests of different stakeholders concerned, namely the decision-makers, the caregivers and the users of program administered by two health and services organisations in Quebec, Canada. These indicators were, later, to serve as the framework for the formal evaluation of the programs concerned. The *individual production* phase yielded 820 proposed indicators which were tabulated to obtain five banks of indicators, one for each dimension of the conceptual framework. TRIAGE allowed for the selection of the 20 best indicators of effectiveness most accurately reflecting the concerns of the three groups of stakeholders and applicable to programs operating in this context.

Also, TRIAGE was used to identify the organisational problems in the mental health program of a general hospital as well as relevant coping strategies. This process came from an increased feeling of dissatisfaction and numerous complaints from the staff. It was decided that all health professionals involved in the program, including doctors, nursing staff, and other professionals would participate in TRIAGE to give the most accurate and complete image of program functioning. Equally important was the involvement of psychiatric patients in the evaluation process. Some 36 participants generated 323 'problems and solutions' during the individual phase. The collective phase was conducted with six different groups, two of them made up of patients only. This phase of TRIAGE helped narrow the scope of the problems to five major areas of difficulties. Interestingly

enough, the participants came up with several proposed solutions. The primary complaint among the staff had to do with the lack of transparency in the management of the program. This is the main reason for which TRIAGE was favored in this process. It enabled each participant to actually see their own answers to the questionnaire and understand the process of transformation of the data. By taking an active role in the evaluation process, they felt their opinions were considered and that they had a part in the identification and implementation of the solutions and functioning of the program.

Recently, TRIAGE was adapted to fit the specific needs of a study in the rehabilitation field. The study was attempting to increase the validity of a measurement tool for the social participation of a clientele with physical disabilities (Fougeyrollas et al. 1998). This tool had been judged too lengthy to administrate by clinicians and not sufficiently sensitive to the characteristics of the clientele. Nearly 30 clinicians from three rehabilitation centres designed to treat the target clientele participated in this TRIAGE exercise. They judged the relevance of 58 items forming the test as well as their level of difficulty and their ability to discern between the characteristics of the clientele. The results obtained by the expert clinicians confirmed those obtained by Rasch statistical analysis (Smith 1997) applied on data obtained from over 300 users (Dumont, Bertrand & Gervais 2002). Recommendations were subsequently made to the authors of the test to develop a version of the test specifically adapted to the target clientele. This experience confirms the content solidity of clinical experts as well as the capacity of TRIAGE to produce valid inexpensive information.

Conclusion

In conclusion, TRIAGE is a tool which places the participants, whoever they may be, in a role of reflection and of action, yielding information which is representative of the reality experienced by these expert participants in their fields. This technique is flexible and has proven its adaptability to the different contexts in which it has been applied. Although TRIAGE bears some similarities to other data collection techniques such as the Delphi technique, the NGT and the focus group, it also contains some interesting complements. In fact, the *interactive production* step, in addition to retaining the participants' active participation, allows access to a deeper level of information and to open up data collection while keeping tabs on the many aspects which can have a determining effect on the evaluation process. Equally important, the visual support provides continuous access to the process of data analysis, facilitating comprehension and appropriation of the evaluative process by participants. Furthermore, information yielded by TRIAGE is validated through the course of the group interaction as it evolves toward a consensus

and is therefore immediately applicable. An increased usage of TRIAGE in various program evaluation processes will help in demonstrating the methodological characteristics of this most promising technique.

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