**THE NOMINAL GROUP TECHNIQUE**

**by Simon Moss**

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| **Introduction** |

**Use of nominal group technique**

The nominal group technique, developed by Delbecq and Van de Ven (1971), is a simple approach that many researchers, consultants, and facilitators apply to determine which solutions to some problem should be prioritized. More precisely, the technique ascertains which solutions members of some community, such as a work team, would prefer. The technique has been applied in a range of circumstances. For example, the nominal group technique has been utilised to

* ascertain which health problems and treatments should be prioritized
* develop guidelines or standards that various professions or organisations should follow
* decide which research programs to prioritise
* enable students to deliver feedback on how to improve a course (e.g., Chapple & Murphy, 1996; see also Varga-Atkins et al., 2017 on how to combine focus groups and nominal group techniques).

**Typical procedure**

Researchers apply a variety of practices to conduct nominal group techniques. Nevertheless, to introduce this approach, the following table outlines a typical sequence of phases.

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| Activity during the group | Details or examples |
| Identify key problems to solve | * Some researchers might precede the nominal group technique with a focus group to identify the key problems to solve * For example, a team of nurses, working in a regional town, might convene to identify the key problems they would like to address * Or, during the nominal group technique, the facilitator might ask individual nurses—or teams of several nurses—to transcribe the two key problems they would like to solve * The team might then combine similar problems, perhaps culminating in four key challenges: aggressive clients, excessive workloads, faulty equipment, and limited opportunities to develop. * They might then prioritize or combine these problems, because the nominal group technique is designed to solve only one problem at a time |
| Identify possible solutions alone | * The facilitator might then ask each person to identify the three changes they would like the organization, such as the hospital, to implement * Sometimes, facilitators ask participants to record these solutions on post-it notes |
| Share unique ideas | * The facilitator invites each person to present two of their solutions as briefly as possible * However, each person should not repeat previous solutions * This activity, for instance, might uncover 24 solutions |
| Combine and clarify ideas | * The facilitator then invites members of the team to combine solutions that overlap—as well as to clarify the key features of each solution * This activity might reduce the 24 solutions to 10 key initiatives |
| Consider previous ideas | * The facilitator might then present other possible solutions—solutions derived from previous literature or other teams * The facilitator might then ask whether the team would like to include any of these alternatives in their list |
| Rank the ideas | * Each individual is prompted to rank these solutions from most important to least important |
| Explain deviations in ranks | * The facilitator collates these rankings * The team then attempt to understand why some initiatives might attract both high and low ranks * That is, team members are granted an opportunity to justify some of their ranks |
| Update ranks | * After this discussion, individuals may be granted opportunities to update their ranks |
| Choose the solution or solutions that are ranked the highest |  |

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| **How to conduct nominal group techniques** |

To arrange and to facilitate nominal groups, researchers tend to apply a sequence of phases. The following table delineates and illustrates some of these phases.

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| Phase | Details or examples |
| Determine the number of groups to arrange | * Studies tend to comprise one to five groups * Alternatively, researchers might continue to arrange more groups until data saturation is reached—that is, until the groups are not generating any unique problems or solutions |
| Decide the number of individuals within each group | * Groups that comprise between 5 to 10 individuals tend to be effective |
| Identify the characteristics of individuals to recruit | * The characteristics of these individuals depends on the research question * Researchers should attempt to recruit the most informed and relevant individuals, sometimes called purposive sampling |
| Develop instructions to facilitate the groups—and then apply these instructions | * While facilitating the groups, one researcher might record fieldnotes about the interpersonal dynamics of the group |

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| **How to analyse and report the data** |

To analyse the data and to report the results, researchers apply a range of methods and approaches. The following table outlines some of these methods and approaches

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| Approaches to analyse or present the data | Details or explanations |
| Outline the problems the group identified | * Researchers might simply present a table * On each row is one problem, accompanied perhaps by the percentage of participants who identified this problem * This information could be presented graphically instead |
| Outline the solutions the group identified | * The approach that was used to present the problems could be used to present the solutions as well |
| For each solution, average the reciprocal of each rank | For example, if one solution attracted ranks of 2, 5, 6, and 8, the researcher would need to   * calculate the reciprocal of these ranks—that is 1/2, 1/5, 1/6, and 1/8 * average these reciprocals * higher numbers represent more important solutions * if someone did not rank an item, the rank and reciprocal are assigned a 0 |
| Compare groups | * Researchers often compare groups—such as genders, disciplines, and so forth—on the rankings * Researchers could conduct the Mann-Whitney U test or similar procedures to achieve this goal * For example, they might discover that experienced nurses are more likely to prioritize a particular solution, such as self-managed teams, than inexperienced nurses |

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| **Comparison with similar techniques** |

To derive the preferences and perspectives of specific communities, researchers can apply a range of other techniques instead. These technique include focus groups, citizen juries, discrete Delphi methods, and discrete choice experiments. The following table outlines these techniques and specifies the drawback of these approaches relative to the nominal group method.

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| Alternative approaches | Drawbacks relative to the nominal group technique |
| **Focus group**. A facilitator prompts a group of individuals to discuss a specific topic. | * Because not everyone needs to express their perspective, a subset of individuals often dominate the conversation * The results, therefore, may not be representative but skewed to more dominant personalities * The solutions are not prioritised |
| **Citizen juries**. A representative sample of individuals receive extensive information about a topic, such as the dissatisfaction of nurses, and attempt to reach consensus about effective solutions | * This technique can be expensive—consuming extensive time (Ryan et al. 2001) |
| **Delphi methods.** A set of experts iteratively rate various principles or ideas until some consensus is reached | * The solutions might overlook the perceptions of individuals who are not experts |
| **Discrete choice experiments**. Individuals are asked to evaluate which of two or more options they prefer. They repeat this task many times | * The various options that are chosen might overlook the range of possibilities available (Hiligsmann et al. 2013) |

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| **Variations** |

Researchers often modify this technique to suit their purposes (e.g., Avram & Carter, 2020). For example, Avram and Carter (2020) embedded the normal group technique with some additional features and called this approach the Nottingham Ingenuity Process. In particular, besides the usual phases

* after the initial solutions are collated—and usually presented on a whiteboard or screen—the individuals decide which of the solutions are feasible today, next month, and in six months
* a subset of individuals may be assigned the role to identify obstacles that could impede the feasibility of these solutions, acting like a critical friend
* at the end, the participants discuss how the organization or group should implement the three preferred solutions as efficiently as possible

Other variations are sometimes applied. For example

* after the solutions are collated, individuals might be asked to blend unrelated initiatives—rather than merely combine overlapping suggestions. These blends of unrelated initiatives are frequently original and useful

**Acceptance of decisions**

One concerns that individuals often raise is that participants are not granted an opportunity to defend and clarify their choices publicly, diminishing the likelihood that individuals will accept the final decisions. To address this concern, some researchers or facilitators

* encourage participants to discuss the potential barriers of each solution as well as insights on these solutions could be implemented (Bartunek & Murnighan, 1984)
* grant participants the opportunity to identify solutions they would like to veto (Bartunek & Murnighan, 1984)

**Ambiguous problems**

Nominal group methods are designed to be efficient—and, for example, seldom last more than one day. Consequently, individuals are granted only limited time to consider and to discuss the problems they would to resolve. However, as the session proceeds, and the solutions are discussed, individuals would often like to reconsider the problems. For example, they start to realise that perhaps that some broader issue might need to be resolved first. To accommodate this complication (Bartunek & Murnighan, 1984), some researchers and facilitators

* identify the extent to which the solutions revolve around the same underlying problem
* if not, the researchers and facilitators might return to discussions that are designed to clarify the problems to be solved

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