

A Resource for College and High School Teachers.

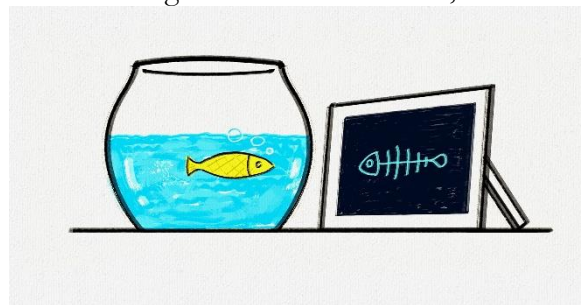
# Making Team Projects Work

## Problem-Solving Tools Part 2: Five Tools for Teams

*It was the second week of the small business course, and the class was assigned a semester-long team project. Working in teams of 5 students, the assignment was to design a new business and all its component parts. The task seemed overwhelming to many of the students who had never done such a large, multi-faceted project before. Other students worried about the people on their team and whether they were up to the task. “We know what the requirements of the project are,” one student noted. “But how do we organize and coordinate all the different parts working in a team of five?”*

That question is answered in today’s post, the fourth in our series on Team Project Tools. Last week we examined a generic problem-solving process, and we noted some of the steps students often miss in that process. This week, we look more specifically at ways that teams can organize their work and make those projects work better.

1. **The 5 Whys.** One of the easiest tools for students to use is a root cause analysis developed by Toyota known as the 5 Whys. The purpose is to ask “Why?” at each stage of the process as groups approach the task. Let’s say one of our teams from the example above wants to open a new restaurant for their business. We can start by asking, “Why is a new restaurant a good choice?” or “Why does the neighborhood need a new poutine restaurant?”
2. **The Fishbone Diagram,** also called “The Ishikawa Diagram” after its founder, is a visual flow chart that resembles a fish lying on its side. Each of the bones represents a category that the team has to analyze in order to complete the project. Sub-categories may also spin off the main categories to provide a more detailed analysis.
3. **The PERT Chart.** First developed by the US Navy in the 1950s to guide submarines, PERT stands for Program Evaluation Review Technique. It includes a timeline with all of the tasks that are required to get a task done along with a schedule to keep the team organized. The PERT chart shows how the



tasks are interdependent—for example, the people working on the project budget can't move forward until the research team reports the cost for each of the components of the project.

4. A Pareto Chart, is a bar chart that presents a visual image of anything you can count on a project. It is often used to identify problems or defects that can impact the quality of a product or process. It is named for Vilfredo Pareto who developed the “80/20 rule,” i.e., 20% of the people own 80% of the wealth. In terms of quality, it means that 80% of the losses come from 20% of the causes. So identifying the issues with a Pareto chart will help the team to deal with and hopefully correct the problems that will keep the team from being successful.
5. Google Drive (or any other cloud storage/team solution). No, we aren't kidding. Many teams already use elements found on Google drive, and they can be particularly helpful in educational settings. Student teams already use Google Docs for sharing ideas for their class projects, and they can share data with Google Sheets and presentation ideas through Google Slides. As educators we have found that setting up a Google folder with instructor access for each team in the class gives us an opportunity to check in with teams and see what kind of progress they are making on the project. It also helps us to identify social loafers and those with minimal contributions to the project. This helps to hold everyone accountable for participation and contribution to the team projects.

### Team Tools for Problem-Solving

1. 5 Whys
2. Fishbone Diagram
3. PERT Chart
4. Pareto Chart
5. Google Drive

While this isn't an exhaustive list, it provides some idea of the tools that are available to help teams solve problems and make their team projects better. Tools provide structure that can keep the team on track with deadlines and deliverables, and they help the manager or teacher monitor the team progress and quality of its work.

Next week we'll discuss tools that help to improve team creativity.

If there is a topic you'd like to see in this series, let us know at [MakingTeamProjectsWork@gmail.com](mailto:MakingTeamProjectsWork@gmail.com).

Lauren Vicker is Communications Professor Emeritus at St. John Fisher College. She is the co-author with Tim Franz of *Making Team Projects Work: A Resource for High School and College Educators*. Learn more about their work and see the resources they provide at <https://teambuildingprocess.com/making-team-projects-work/>

*“Fairy Tale” Image from Cdd20 on Pixabay.*