

1.3.3: Group Problem Solving

Learning Objectives

1. Identify and describe how to implement seven steps for group problem solving.

No matter who you are or where you live, problems are an inevitable part of life. This is true for groups as well as for individuals. Some groups—especially work teams—are formed specifically to solve problems. Other groups encounter problems for a wide variety of reasons. Within a family group, a problem might be that a daughter or son wants to get married and the parents do not approve of the marriage partner. In a work group, a problem might be that some workers are putting in more effort than others, yet achieving poorer results. Regardless of the problem, having the resources of a group can be an advantage, as different people can contribute different ideas for how to reach a satisfactory solution.

Once a group encounters a problem, the questions that come up range from “Where do we start?” to “How do we solve it?” While there are many ways to approach a problem, the American educational philosopher John Dewey’s reflective thinking sequence has stood the test of time. This seven-step process (Adler, R., 1996) has produced positive results and serves as a handy organizational structure. If you are member of a group that needs to solve a problem and don’t know where to start, consider these seven simple steps:

1. Define the problem
2. Analyze the problem
3. Establish criteria
4. Consider possible solutions
5. Decide on a solution
6. Implement the solution
7. Follow up on the solution

Let’s discuss each step in detail.

Define the Problem

If you don’t know what the problem is, how do you know you can solve it? Defining the problem allows the group to set boundaries of what the problem is and what it is not and to begin to formalize a description or definition of the scope, size, or extent of the challenge the group will address. A problem that is too broadly defined can overwhelm the group. If the problem is too narrowly defined, important information will be missed or ignored.

In the following example, we have a Web-based company called Favorites that needs to increase its customer base and ultimately sales. A problem-solving group has been formed, and they start by formulating a working definition of the problem.

Too broad: “Sales are off, our numbers are down, and we need more customers.”

More precise: “Sales have been slipping incrementally for six of the past nine months and are significantly lower than a seasonally adjusted comparison to last year. Overall, this loss represents a 4.5 percent reduction in sales from the same time last year. However, when we break it down by product category, sales of our nonedible products have seen a modest but steady increase, while sales of edibles account for the drop off and we need to halt the decline.”

Analyze the Problem

Now the group analyzes the problem, trying to gather information and learn more. The problem is complex and requires more than one area of expertise. Why do nonedible products continue selling well? What is it about the edibles that is turning customers off? Let’s meet our problem solvers at Favorites.

Kevin is responsible for customer resource management. He is involved with the customer from the point of initial contact through purchase and delivery. Most of the interface is automated in the form of an online “basket model,” where photographs and product descriptions are accompanied by “buy it” buttons. He is available during normal working business hours for live chat and voice chat if needed, and customers are invited to request additional information. Most Favorites customers do not access this service, but Kevin is kept quite busy, as he also handles returns and complaints. Because Kevin believes that superior service retains customers while attracting new ones, he is always interested in better ways to serve the customer. Looking at edibles and nonedibles, he will

study the cycle of customer service and see if there are any common points—from the main Web page, through the catalog, to the purchase process, and to returns—at which customers abandon the sale. He has existing customer feedback loops with end-of-sale surveys, but most customers decline to take the survey and there is currently no incentive to participate.

Mariah is responsible for products and purchasing. She wants to offer the best products at the lowest price, and to offer new products that are unusual, rare, or exotic. She regularly adds new products to the Favorites catalog and culls underperformers. Right now she has the data on every product and its sales history, but it is a challenge to represent it. She will analyze current sales data and produce a report that specifically identifies how each product—edible and nonedible—is performing. She wants to highlight “winners” and “losers” but also recognizes that today’s “losers” may be the hit of tomorrow. It is hard to predict constantly changing tastes and preferences, but that is part of her job. It’s not all science, and it’s not all art. She has to have an eye for what will catch on tomorrow while continuing to provide what is hot today.

Suri is responsible for data management at Favorites. She gathers, analyzes, and presents information gathered from the supply chain, sales, and marketing. She works with vendors to make sure products are available when needed, makes sales predictions based on past sales history, and assesses the effectiveness of marketing campaigns.

The problem-solving group members already have certain information on hand. They know that customer retention is one contributing factor. Attracting new customers is a constant goal, but they are aware of the well-known principle that it takes more effort to attract new customers than to keep existing ones. Thus, it is important to insure a quality customer service experience for existing customers and encourage them to refer friends. The group needs to determine how to promote this favorable customer behavior.

Another contributing factor seems to be that customers often abandon the shopping cart before completing a purchase, especially when purchasing edibles. The group members need to learn more about why this is happening.

Establish Criteria

Establishing the criteria for a solution is the next step. At this point, information is coming in from diverse perspectives, and each group member has contributed information from their perspective, even though there may be several points of overlap.

Kevin: Customers who complete the postsale survey indicate that they want to know (1) what is the estimated time of delivery, (2) why a specific item was not in stock and when it will be available, and (3) why their order sometimes arrives with less than a complete order, with some items back-ordered, without prior notification.

He notes that a very small percentage of customers complete the postsale survey, and the results are far from scientific. He also notes that it appears the interface is not capable of cross-checking inventory to provide immediate information concerning back orders, so that the customer “buys it” only to learn several days later that it was not in stock. This seems to be especially problematic for edible products, because people may tend to order them for special occasions like birthdays and anniversaries. But we don’t really know this for sure because of the low participation in the postsale survey.

Mariah: There are four edible products that frequently sell out. So far, we haven’t been able to boost the appeal of other edibles so that people would order them as a second choice when these sales leaders aren’t available. We also have several rare, exotic products that are slow movers. They have potential, but currently are underperformers.

Suri: We know from a zip code analysis that most of our customers are from a few specific geographic areas associated with above-average incomes. We have very few credit cards declined, and the average sale is over \$100. Shipping costs represent on average 8 percent of the total sales cost. We do not have sufficient information to produce a customer profile. There is no specific point in the purchase process where basket abandonment tends to happen; it happens fairly uniformly at all steps.

Consider Possible Solutions to the Problem

The group has listened to each other and now starts to brainstorm ways to address the challenges they have addressed while focusing resources on those solutions that are more likely to produce results.

Kevin: Is it possible for our programmers to create a cross-index feature, linking the product desired with a report of how many are in stock? I’d like the customer to know right away whether it is in stock, or how long they may have to wait. As another idea, is it possible to add incentives to the purchase cycle that won’t negatively impact our overall profit? I’m thinking a small volume discount on multiple items, or perhaps free shipping over a specific dollar amount.

Mariah: I recommend we hold a focus group where customers can sample our edible products and tell us what they like best and why. When the best sellers are sold out, could we offer a discount on related products to provide an instant alternative? We might also cull the underperforming products with a liquidation sale to generate interest.

Suri: If we want to know more about our customers, we need to give them an incentive to complete the postsale survey. How about a 5 percent off coupon code for the next purchase to get them to return and to help us better identify our customer base? We may also want to build in a customer referral rewards program, but it all takes better data in to get results out. We should also explore the supply side of the business by getting a more reliable supply of the leading products and trying to get discounts that are more advantageous from our suppliers, especially in the edible category.

Decide on a Solution

Kevin, Mariah, and Suri may want to implement all the solution strategies, but they do not have the resources to do them all. They'll complete a cost-benefit analysis, which ranks each solution according to its probable impact. The analysis is shown in Table 1.3.3.1.

Table 1.3.3.1: Cost-Benefit Analysis

Source	Proposed Solution	Cost	Benefit	Comment
Kevin	Integrate the cross-index feature	High	High	Many of our competitors already have this feature
	Volume discount	Low	Medium	May increase sales slightly
	Free shipping	Low	Low	This has a downside in making customers more aware of shipping costs if their order doesn't qualify for free shipping
Mariah	Hold a focus group to taste edible products	High	Medium	Difficult to select participants representative of our customer base
	Search for alternative products to high performers	Medium	Medium	We can't know for sure which products customers will like best
	Liquidate underperformers	Low	Low	Might create a "bargain basement" impression inconsistent with our brand
Suri	Incentive for postsale survey completion	Low	Medium	Make sure the incentive process is easy for the customer
	Incentive for customer referrals	Low	Medium	People may feel uncomfortable referring friends if it is seen as putting them in a marketing role
	Find a more reliable supply of top-selling edibles	Medium	High	We already know customers want these products

Source	Proposed Solution	Cost	Benefit	Comment
	Negotiate better discounts from vendors	Low	High	If we can do this without alienating our best vendors, it will be a win-win

Now that the options have been presented with their costs and benefits, it is easier for the group to decide which courses of action are likely to yield the best outcomes. The analysis helps the group members to see beyond the immediate cost of implementing a given solution. For example, Kevin's suggestion of offering free shipping won't cost Favorites much money, but it also may not pay off in customer goodwill. And even though Mariah's suggestion of having a focus group might sound like a good idea, it will be expensive and its benefits are questionable.

A careful reading of the analysis indicates that Kevin's best suggestion is to integrate the cross-index feature in the ordering process so that customers can know immediately whether an item is in stock or on back order. Mariah, meanwhile, suggests that searching for alternative products is probably the most likely to benefit Favorites, while Suri's two supply-side suggestions are likely to result in positive outcomes.

Implement the Solution

Kevin is faced with the challenge of designing the computer interface without incurring unacceptable costs. He strongly believes that the interface will pay for itself within the first year—or, to put it more bluntly, that Favorites' declining sales will get worse if the Web site does not have this feature soon. He asks to meet with top management to get budget approval and secures their agreement, on one condition: he must negotiate a compensation schedule with the Information Technology consultants that includes delayed compensation in the form of bonuses after the feature has been up and running successfully for six months.

Mariah knows that searching for alternative products is a never-ending process, but it takes time and the company needs results. She decides to invest time evaluating products that competing companies currently offer, especially in the edible category, on the theory that customers who find their desired items sold out on the Favorites Web site may have been buying alternative products elsewhere instead of choosing an alternative from Favorites's product lines.

Suri decides to approach the vendors of the four frequently sold-out products and ask point blank, "What would it take to get you to produce these items more reliably in greater quantities?" By opening the channel of communication with these vendors, she is able to motivate them to make modifications that will improve the reliability and quantity. She also approaches the vendors of the less popular products with a request for better discounts in return for their cooperation in developing and test-marketing new products.

Follow Up on the Solution

Kevin: After several beta tests, the cross-index feature was implemented and has been in place for thirty days. Now customers see either "in stock" or "available [mo/da/yr]" in the shopping basket. As expected, Kevin notes a decrease in the number of chat and phone inquiries to the effect of, "Will this item arrive before my wife's birthday?" However, he notes an increase in inquiries asking, "Why isn't this item in stock?" It is difficult to tell whether customer satisfaction is higher overall.

Mariah: In exploring the merchandise available from competing merchants, she got several ideas for modifying Favorites' product line to offer more flavors and other variations on popular edibles. Working with vendors, she found that these modifications cost very little. Within the first thirty days of adding these items to the product line, sales are up. Mariah believes these additions also serve to enhance the Favorites brand identity, but she has no data to back this up.

Suri: So far, the vendors supplying the four top-selling edibles have fulfilled their promise of increasing quantity and reliability. However, three of the four items have still sold out, raising the question of whether Favorites needs to bring in one or more additional vendors to produce these items. Of the vendors with which Favorites asked to negotiate better discounts, some refused, and two of these were "stolen" by a competing merchant so that they no longer sell to Favorites. In addition, one of the vendors that agreed to give a better discount was unexpectedly forced to cease operations for several weeks because of a fire.

This scenario allows us to see that the problem may have several dimensions as well as solutions, but resources can be limited and not every solution is successful. Even though the problem is not immediately resolved, the group problem-solving pattern serves as a useful guide through the problem-solving process.

Key Takeaway

Group problem solving can be an orderly process when it is broken down into seven specific stages.

Exercises

1. Think of a problem encountered in the past by a group of which you are a member. How did the group solve the problem? How satisfactory was the solution? Discuss your results with your classmates.
2. Consider again the problem you described in Exercise 1. In view of the seven-step framework, which steps did the group utilize? Would following the full seven-step framework have been helpful? Discuss your opinion with a classmate.
3. Research one business that you would like to know more about and see if you can learn about how they communicate in groups and teams. Compare your results with those of classmates.
4. Think of a decision you will be making some time in the near future. Apply the cost-benefit analysis framework to your decision. Do you find this method helpful? Discuss your results with classmates.

References

Adler, R. (1996). *Communicating at work: Principles and practices for business and the professions*. Boston, MA: McGraw-Hill.

McLean, S. (2005). *The basics of interpersonal communication*. Boston, MA: Allyn & Bacon.

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