

## Finding the Right Problem

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In an educational setting, a solution that has worked for one problem may not work for the same problem that occurs at a different time in a different work conditions. However, administrators and teachers resort to quick solutions to the perceived problem, consequently affecting not only the curriculum but also the students' learning. This paper shows how administrators and teachers can find problems prior to problem solution by taking three steps: (1) Examining the interconnectivity of things; (2) Exploring possible and alternative problems and (3) Asking the right question. The paper demonstrates not only how these steps operate in specific situations encountered by administrators and teachers but also how finding the problem can be an effective tool in performing their respective roles.

Throughout long years of study, students are trained to solve problems that have been formulated by their teachers. Sometimes, these problems are lifted from the old crispy pages of ready-made-lesson plans, with one ready made solution. In almost every curriculum and syllabus, the objective is found because problem solving is one the skills students are trained in. Unfortunately, their abilities in actually identifying, or are not as well developed.

This paper discusses steps essential to effective problem finding in the educational setting and explains how the administrator can apply them to problematic cases in education. It also demonstrates how the three-step problem finding method may be applied using the Interconnection diagram and the Image vs Desired Condition Questionnaire.

Problem finding is the most neglected aspect of

skills building in education. In most cases, the student experiences problem finding for the first time when he or she is required to write a thesis. This could be the reason why some graduate students experience difficulties in thesis writing: they can hardly find a problem to investigate. The lack of training in problem finding is also revealed in the way some administrators manage educational problems, which can be far from the systematic, intelligent, and skillful operation of resources in working out challenges to facilitate the attainment of their program objectives of teaching, research and service.

Three American scholars from different fields have laid down the intellectual roots of problem finding: Charles Pierce, George Herbert Mead and John Dewey (McPherson, 1986, p.275-276). In the early 1970s, Jacob Getzels and Mihaly Csikszentmihalyi studied how artists discover, create, and formulate a problem. They gathered 31 fine arts students and observed their problem-finding behavior. They found that problem-construction activities such as object handling, object interaction and the uniqueness of objects handled, prior to the outset of drawing, were strongly related to indices of the originality and aesthetic value of the resulting products, as well as indices of long-term artistic success" (Mumford, Reiter-Palmon & Redmund, 1994, p.9). After

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the experiment, they arrived at the conclusions that (a) problem-finding can be studied objectively; (b) there are individual differences in problem-finding just as there are in problem solving; (c) there is a positive relationship between the quality of the solution that is reached; and (d) problem-finding ability seems to be an enduring characteristic (Getzels, 1979, p.10).

There were few scholars who have taken an interest in problem processing. David Kolb, for one, developed a model for problem management based on experiential learning. This model is formed around four analytical stages: situation, problem, solution and implementation. Kolb begins with a given problem, which is then scrutinized in the situation analysis stage in terms of value (or urgency) and priority (or importance).

In a sense, the problem manager in problem analysis is in the role of a detective-gathering clues and information about how the problem was committed, organizing those clues into a scenario of “who done it” and using that scenario to gather more information to prove or disprove the original hunch (Kolb in McPherson, 1986, p.281).

Another group of scholars, Okuda, Runco & Berger (1991) attempted to administer a measure of problem-finding or problem-construction skill to a sample of 91 elementary school students. “The resulting correlations indicated that problem-finding was the single best predictor of real-world creative activities” (Munford, Reiter-Palmon & Redmond, 1994, p.9).

Mihaly Csikszentmihalyi (1999) conducted a 30-year-longitudinal study of the creative process in relation to problem finding. He found that the creative process begins at that point when a person gets interested in or becomes curious or concerned about something. “... and then at some point there is something problematic about that. It might be vague, a sense of uneasiness, and this starts problem formulation” (p.2).

In other areas of study, such as psychology, a Schematic Diagram is used to point out the cause and effects of the problem. Similarly, the Problem Tree is used in Business Management to identify the root of the problem and its effects on its constituents.

Despite these studies, the mental attitude attributed to problem finding was not clearly spelled out nor were its parameters ever drawn” (Dudak & Cote, 1994, p.130). In 1982, James T. Dillon claimed that no theory of problem

finding appeared to have been constructed.

## Problem-finding in the educational setting

In the light of lessons learned from the experiment conducted among fine arts students, Getzels studied administrative behavior. From the standpoint of problem-finding, his study re-affirmed his belief that “in both the study and practice of educational administration, ... attention must be directed not only to the ultimate product or solution but also, since the quality of solutions is a function of the quality of the problems, to how problems are found” (p. 15).

In a study I conducted in 1997 among Filipino College administrators on *The application of theory on the management of educational problems*, I found that in the process of management of educational problems, the administrator goes through three essential stages: defining, analyzing and solving. Defining the problem occurs when the cause of imbalance in the operations functions is determined. Analyzing is the act of careful examination of the threatening challenge and the possible alternatives that deal with the challenge. Solving is implementing the action that offers maximum efficiency in eliminating the challenge. In examining the cause of the problem in the department (defining) and in examining the problem and considering alternatives (analyzing), the administrator carries on an open communication in getting feedback from the people involved in the problem. In the process, he or she maintains good rapport with his people and at the same time manages the problem.

Practicing administrators encounter a myriad of problems, some routine-related that can be regulated by policies and some demanding creative problem-solving and involving a variety of alternatives and more people. Those who have had no formal training in administration tend to manage problems based on experience or apply the trial and error ‘heuristic method’ or the simple rule-of-thumb that guides decision-making. As a result of this practice, he or she acquires a series of generalizations about the way problems are solved and consequently operates on these generalizations whenever confronted with problems.

In the conduct of the study of the management of educational problems, I have also observed that when

administrators solved the wrong problems, more problems affected the faculty members, the organization, the curriculum and the students, not to mention the costs entailed in correcting mistakes. While it is undeniable that there have been attempts to identify problems in planning sessions and department meetings, these exercises have to be consciously geared towards systematic problem finding.

For education to be truly responsive to the needs of both the students and the society, it should be led by capable administrators who are guided by knowledge and equipped with essential skills, able to deal with the complex situations in everyday schooling. Hence, there is a need to develop in the administrator problem-finding skills, specifically the ability to determine an imbalance in the operation's functions. Administrators who desire to be effective in their work should therefore seriously consider this.

### A problem finding model

I define a problem as a challenge brought about by an imbalance in the operation's functions due to an interruption of the attainment of objectives. Problem

finding is a creative activity that precedes problem solving which assumes competence in (a) challenging one's assumptions, (b) refraining from always obeying orders and rules, (c) developing attitudes to new ideas, (d) negating the *status quo* as a way of problem-solving and (e) not resorting to *policy solutions*.

There are three steps essential to effective problem finding(see Figure 1): (1) examination of the interconnection of things; (2) exploration of possible and alternative problems and (3) asking the right question.

*Interconnection analysis.* Nothing exists by itself. Everything is linked directly or indirectly to one source and derives from it certain aspects that manifest themselves either explicitly or vaguely. Everything connects to something that possesses similar qualities, to ideas that bear the same thoughts, to images that project the same qualities, to beliefs that find expression through culture. Everything interconnects to something, passing on its own nucleus of influences.

In examining the interconnection of things, the visually pattern-oriented administrator may use a diagram showing the problematic case and its relation with other variables. Also helpful are Tony Buzan's *Mind-mapping*, Gabriel Rico's *Clustering* or the *Brain Webs* designed by Charles Hess, et.al. The administrator may also involve the people within his organization through

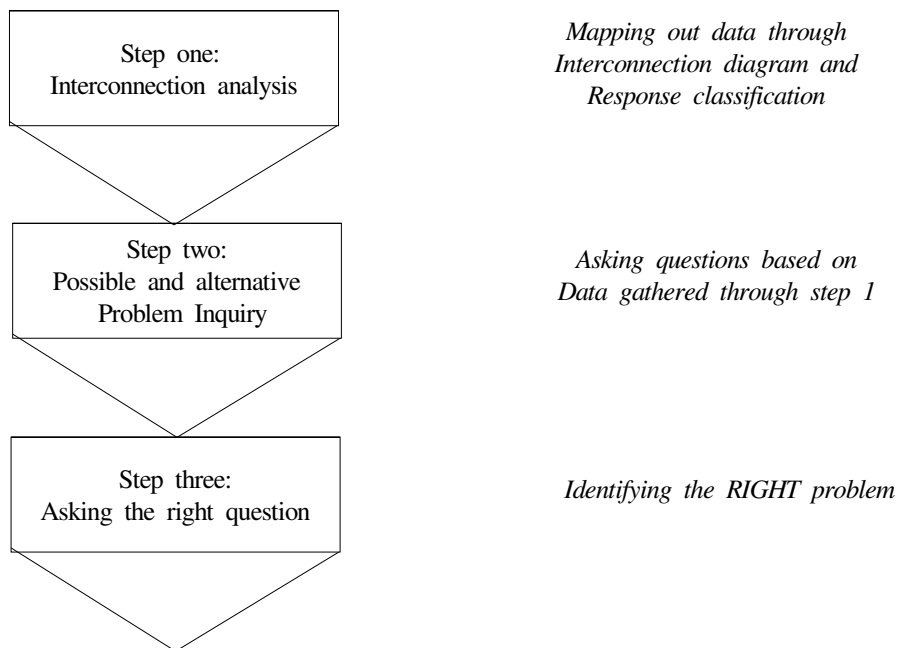


Figure 1. Three-step-Problem Finding Model

a brainstorming session. Here, the members of the group can conduct analytical thinking together, on which things are interrelated and how they connect to each other.

*Possible and alternative problems.* The idea here is not to settle with the first problem that emerges as a result of a hunch, intuition or suspicion. Thinking that he or she has identified the problem, the administrator spends all of his or her energies putting into operation a solution that worked for a previous problem. The danger here is that in the dynamic world of the educational setting, problems are not all the same so that one solution from an administrator's 'reservoir' may be rendered useless in the next one, even though both seem similar. It is also possible that the problem solution to the perceived problem may only give rise to a more complex problem.

In exploring possible and alternative problems, the administrator needs to ask a variety of questions such as those that look into the interconnection of things, the motives behind actions, perceptions against reality, articulation vs. intention, consequences, causes and effects - thus exploring the many factors that interconnect

with the problematic case. This can be a very tedious exercise that requires not only the presence of some members of the organization but also calls for openness, creativity, sincerity and freedom of expression.

*Asking the right question.* After exhausting all of the possible and alternative questions without intending to answer them, the administrator, together with his team, now selects the best alternative question or the 'right' question - that one question that carries with it the heart of the problem that can burst into a number of interconnected problems.

To illustrate how these steps work, let us look into the case of a hypothetical disruptive youth using the Interconnection Diagram.

*Example 1: The Interconnection Diagram*

In the examination of interconnectivity of things, we look at the disruptive youth and his relation to *personal variables*, *institutional variables*, and *his own potentialities*. A graphic illustration looks like this:

As shown in the Figure 2, many factors interconnect

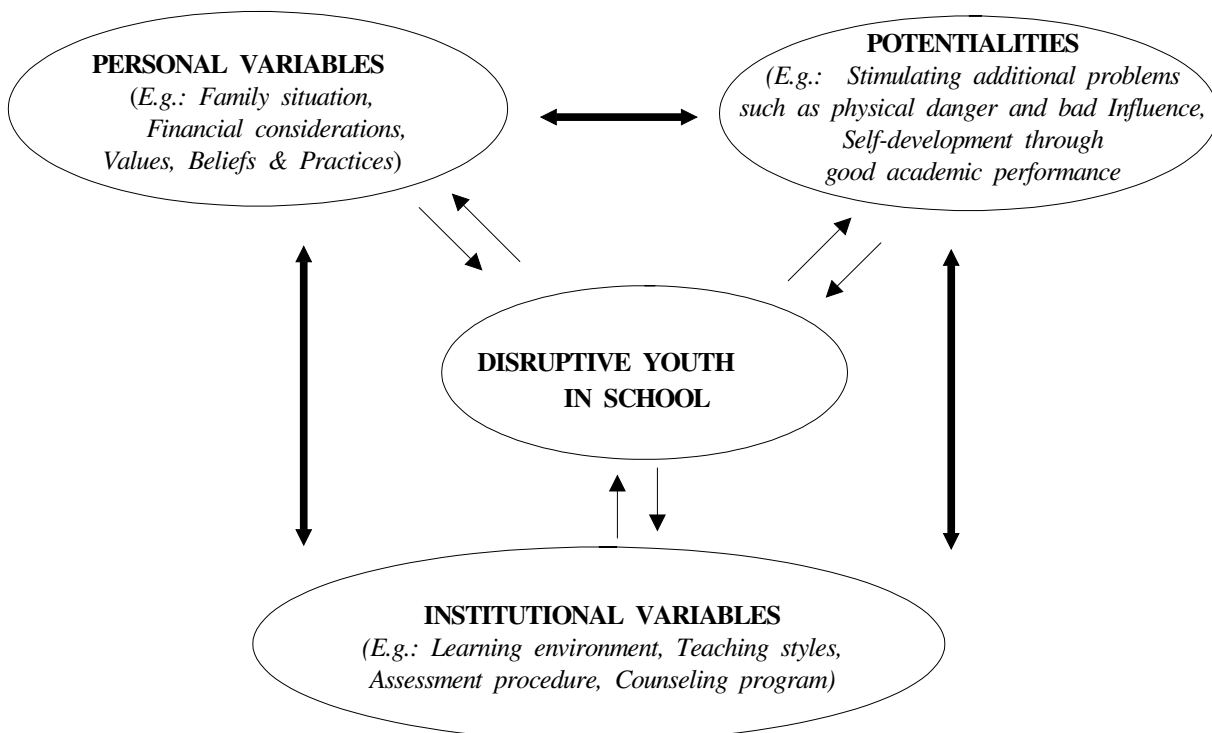


Figure 2. Interconnection Diagram: Personal Variables, Institutional Variables and Potentialities

with the problematic case.

The disruptive youth is not merely an entity in itself. There can be connections between Personal and Institutional variables, likewise between his own potentialities and the institutional variables. The *personal variables* include family situation, financial concerns, values, beliefs or certain individual practices. These variables may, in many ways, connect to variables found in school, or the *institutional variables* such as the teachers' teaching style, the learning environment, assessment procedures, or even the counseling program. *Potentialities* may either be positive or negative. The examples in Figure 2 show that physical danger or bad influence may stimulate additional problems while good academic performance may bring about self-development.

In exploring the possible and alternative problems, we ask a variety of questions such as, "How does the disruptive youth fit into the scheme of things?" "How do people involved in the academic life of the disruptive youth deal with his behavior?" "Are his needs significantly met?" "What can be done to make the disruptive youth in school improve in his academic performance?" Questions such as these will lead to selecting the best alternative question, from which the **right question** may be formulated. For instance, "How can the institutional variables be combined with personal variables to help the disruptive student fully use his potentialities?" After finding the right problem to be addressed, possible solutions can now be drawn.

*Example 2: Response classification*

The second example concerns faculty development.

Instead of carelessly spending money sending teachers to seminars and conferences that may after all not have any truly concrete impact on the development of the faculty member, finding the right problem in relation to Continuing Professional Education (CPE) may be discovered by asking the beneficiaries themselves, the teachers, to accomplish the questionnaire below(see Table 1).

There will be several answers to the above questions representing a variety of perceptions, wishes, intentions, motives, plans and reflections of the teachers. By classifying the responses accordingly, the administrator can track interconnections between the personal variables, institutional variables and potentialities as we did in example 1.

In exploring the possible and alternative problems, a variety of questions can be formulated such as, "To what extent does the present CPE affect its beneficiaries?"

"How can the teachers fully benefit from the CPE?"

"How can the CPE benefit both the institution and the teachers?" "How can the CPE be enhanced to significantly meet the demands of the institution and the teachers?"

These questions can lead to selecting the best alternative question, from which the **right question**, may be formulated such as, "How can the institutional variables be combined with personal variables to enable the teachers to fully use their potentialities?" After finding the problem, possible solutions can then be discussed among the administrative team members.

By applying the three problem-finding steps using the information gathered from the program beneficiaries, the administrator can find the right problem to solve. This exercise will likewise give him or her data to map things out for a CPE Program.

Table 1. Image vs Desired Condition Questionnaire

IMAGE	DESIRED CONDITION
What comes to mind when you think of Continuing Professional Education (CPE)?	What improvements do you desire to see in CPE?
How do you fit into the existing CPE of your school?	In what ways would you like to benefit from the CPE of your school?

## Conclusion

The three-step problem finding model is intended to aid the administrator in systematically finding the right problem before proceeding to problem solving. In this paper, I have discussed how the model is essential to effective problem finding in the educational setting and have explained how the administrator can apply them to problematic cases. I also demonstrated how the three-step-problem finding may be applied using the Interconnection diagram and the Image vs Desired Condition Questionnaire.

There are many other strategies that can be used in finding problems. Brainstorming sessions, focused group interviews and classroom teaching techniques may all be used, guided by the Three-step Problem Finding Model rather than jumping instinctively at the first problem that emerges from the problematic situation. The administrator may therefore choose to invest more time, energy and other resources in finding the right problem before proceeding to problem solution.

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