

“There are two types of learning . . . informative learning allows people to learn more about the things that fit their mental models, while transformative learning is the process of changing mental models.”

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# What do Organizations Need to Learn to Become a Learning Organization?

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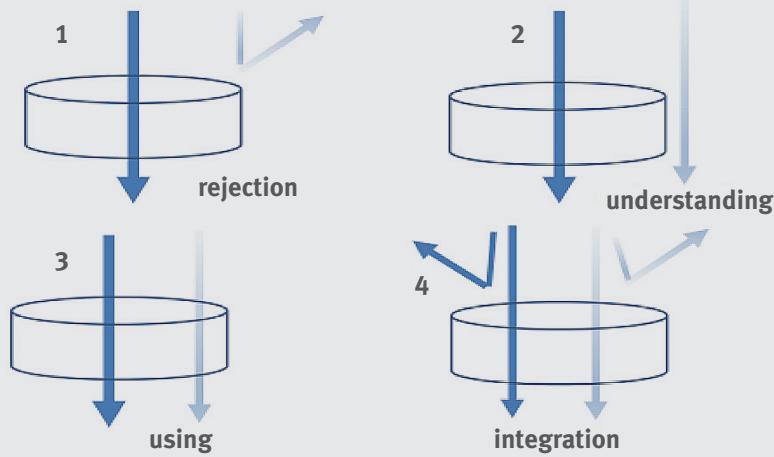
We have found that many people talk about learning organizations without realizing the underlying assumptions that are required to develop a learning organization. Once we facilitated a group training and did a blitz survey about how many people believed they work in a learning organization. All but two out of 18 people believed they worked for a learning organization. They associated the concept of learning organization with the learning opportunities their organizations offered to employees. By the end of the training, in which we explored the concept of learning organizations, we asked the same question again and only two out of 16 said they worked for a learning organization. Why? They realized that there is much more to the concept of organizational learning than the amount of training people can take.

## Two Types of Learning

To explore this concept, we will begin with the word “learning.” There are two types of learning—informative and transformative (Kegan, 2000). Simplistically speaking, informative learning allows people to learn more about the things that fit their mental models, while transformative learning is the process of changing mental models. To be consistent, we will use the term mental model across the article to describe a set of beliefs that generates people’s assumptions and values and informs their motivations. The terms mental model and belief system will be used interchangeably.

A simplistic metaphor for the two kinds of learning may help. Imagine you made a swimming hole in the backyard: you dug a hole, added water, and had a place to swim. You could embellish it by adding a diving board perhaps, or a rope swing, but in essence, it is a swimming hole. In this metaphor, the additions and changes are informative learning—taking in only the new information which fits with one’s preconceived mental model of a swimming hole. But what if you saw that some people grew fish in their ponds, and the idea comes that you could expand the swimming hole to make it a fish farm too. You could reject this idea right away; you could understand that different people have different needs but you choose not to have fish; or you could become a fish farm fan. Converting your swimming hole into a fish farm/swimming hole is transformative learning, at least in this simplistic metaphor. Your mental model changed.

Transformative learning happens in stages, which we will illustrate with an example of intercultural interaction, because individuals from different cultures have absolutely different mental models of life. In the first stage, *rejection*, the person rejects, (or ignores, denies, dismisses—pick a word) any new information that does not fit in the current mental model. Often, during this stage, the carrier of the other mental model is viewed as being, at best ridiculous, or wrong, or at worst evil. The readers perhaps can relate to their own experience when they faced a culture that was extremely different from their own, and thus can recreate the plethora of



**Figure 1.** In 1, the old mental model is kept and all else is rejected. In 2, the old and new are accepted but only the old is used. In 3, some new behaviors are tried out, but nothing of the old is rejected. In 4, the mental model has a new mix, some of the old and new are kept and some are rejected.

assumptions (often inaccurate), feelings, and emotions that came with this.

In the second stage, *understanding*, the person gets used to the idea that there are other ideas, assumptions, or values, which have the right to exist, and this is fine, as long as the person does not have to use or accept them. The readers perhaps have often heard a phrase, "we agree to disagree." This reflects that the parties understand that the other has a different opinion but are adamant about their own positions and reluctant to even try something different. Using the intercultural example, this would be a situation when one has to live in a different culture for a short time, perhaps during travel. The person very much sticks to her own mental model, eats only foods she is used to, does only things she is used to, and does not venture off the beaten track. The person may find the other mental model amusing, but does not have to fight it, and does not certainly accept it for herself.

In the third stage, *using*, the person tries out new behaviors from a different mental model, either by choice, or because this is the only way to adapt to a new environment. In our intercultural example, that would be a person who has to live in a different culture for a longer time and finds some customs of this new culture acceptable. The person tries different foods, experiences new activities and new ways of thinking as part of being in the new culture

but does not feel that this is something to embrace permanently.

The fourth stage, *integration*, is characterized by a creation of a mental model that incorporates the best elements of the old and new mental models and rejects elements that do not work. In our example, the person becomes bi-cultural. The person's mental model becomes an amalgam of beliefs and assumptions that work in a new environment. Some new ideas are accepted, and some old ideas are rejected.

In *Figure 1*, the cylinder represents one's mental model and the arrows depict ideas that are taken in. The darker arrow is information that fits the mental model, and the faded line represents ideas for a different mental model. The difference between the last two stages is the relationship

between behaviors and belief system that drives the behaviors. In the third stage, people may behave differently, but because the belief system did not change, the behavior may be temporary. In the fourth stage, the behavior change is permanent as it is governed by a new mental model or new *governing beliefs*.

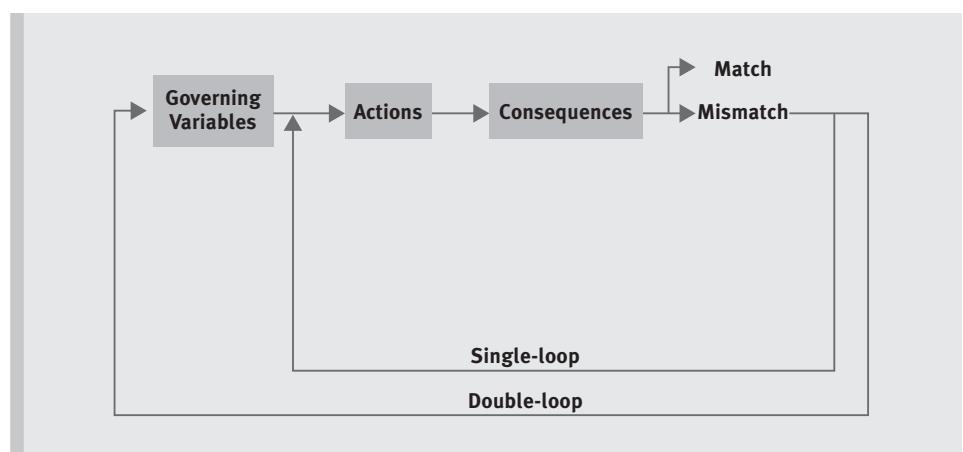
### Double-Loop Learning

The governing beliefs language brings us to the concept of double-loop learning.

Much of the foundational work in the field of double-loop learning can be attributed to Chris Argyris. Argyris began his career with an interest in reducing unfairness. As Argyris (Argyris & Schön, 1996) studied unfairness, he found that human beings were skillful at non-learning due to their inability to learn, detect, and correct their mistakes. To further explain why human beings were skillful at non-learning, Argyris distinguished between single-loop and double-loop learning (*Figure 2*).

We find that many people miss the essential difference between single and double-loop learning. In single-loop learning, if one tries to do something and it does not work, then one changes something. For example, if one cooks and the dish is too salty, the next time one adds less salt. In Argyris' language, single-loop learning occurs when a mismatch in a person's behavior and intention is detected and corrected without changing his/her underlying values and assumptions.

Double-loop learning is needed when



**Figure 2.** Single-Loop and Double-Loop Learning

the problem originates in how people think or believe, and thus correcting this problem requires a change in the governing beliefs. For instance, if a manager tries to get her work team to work more efficiently by micromanaging the work and finds that this tactic does not succeed, the change that is needed is in the manager's belief about the effectiveness of micromanagement. The difficulty is that it can be hard to identify and then change certain beliefs, as it takes not only a significant amount of self-knowledge, but courage and skill to change old beliefs. In Argyris' language, double-loop learning occurs when a mismatch in a person's behavior and intention is detected and corrected by first changing one's underlying values.

With double-loop learning, when individuals face a problem, they have to reflect on their behavior and identify and challenge the underlying assumptions that drive this behavior. Through this process, the individuals' underlying assumptions, which previously remained implicit or unchallenged, are now exposed. While it may feel unsafe at first, the individuals then learn by reflecting on the entire belief system that led to the problem, and this learning opens the door to changes in their thoughts and behaviors, or to a new mental model. Changing underlying beliefs or assumptions is not easy, the process can raise anxiety, but the change is possible.

Argyris and Schön (1996) described the threefold governing variables needed for double-loop learning and for a learning organization: (a) belief in the importance of using valid information; (b) belief in the necessity of free and informed choice; and (c) belief in the importance of internal commitment to the decisions that are made and the constant monitoring (i.e., use of feedback loops) to make sure decisions actually lead to the desired outcomes.

### What do Individuals Need to be able to Engage in Double-Loop Learning?

While Argyris used the notion of double-loop learning in the context of organizations, the concept can pertain to individual learning as well. For individual double-loop learning to occur, some pre-requisites have

to be in place. The individual has to be willing to engage in transformative learning and be reasonably comfortable with anxiety. These two always go together. Mezirow (2000) warned:

Transformative learning, especially when it involves subjective reframing, is often an intensely threatening emotional experience in which we have to become aware of both the assumptions undergirding our ideas and those supporting our emotional responses to the need to change. (p. 6-7)

Then, the individual has to go through the four essential steps:

1. Critical reflection of self-behavior;
2. Identification of values or assumptions underlying the behavior;
3. Changes in underlying values or assumptions; and
4. Change in the behavior (La Venture, 2013).

To demonstrate the application of these steps on an individual level, we will use a situation of Eve, who does not get along with her co-worker Mike. She sees him as arrogant, believes that he constantly questions her work, and experiences him acting like he always knows best.

**Critical reflection of self-behavior**—Eve took time, after she had a run-in with Mike, to figure out what happened and analyze the situation. She was working on a spreadsheet for a project for which she and Mike were both responsible, when he walked into her office and said, "Did you complete the spreadsheet for the meeting this afternoon? I want to verify that you did everything right." Eve's face got hot and she could feel her body clench as she grew angry. She told him she would look at the spreadsheet again to make sure it was right, and he left saying he would be back in an hour to see her work. She realized that she had acquiesced to his implication that her work needed monitoring, as well as that Mike was more able than she.

### Identification of values or assumptions

**underlying the behavior**—Eve tried to identify what values and assumptions were being stimulated when she became angry. She realized she did not tell Mike about her conviction that her work had been done correctly in the first place. As Eve became more purposeful in critical reflection of self-behavior, she discovered that it is important to her to do good work and have her education and work ethic be valued by others. In addition, she realized that it is important that others listen to her. Upon further reflection, she realized two things. One is that in the conversations with Mike on this project, she did not believe that he valued her work or her expertise on the topic, and this made her angry. Looking into her past she saw this as a pattern; when being challenged, she tended to defer, fearing that the other person would somehow hurt her if she stood up for herself. She also realized that she assumed that he finds her incompetent. She got upset with herself because she did not have the courage to stand up for herself and for her work. This too was an old pattern, becoming angry at the other person first and later becoming angry with herself.

**Changes in underlying values or assumptions**—What values or assumptions might Eve have to change? One is to recognize that she deferred to Mike rather than defend her work. Eve's task was to explore what beliefs about herself led her to defer, and then to choose whether or not to keep these beliefs. Another was that she assumed Mike thought she was incompetent. But why did she assume rather than ask him about what he meant? What belief prevented her from finding out more about Mike's concerns? Wrestling with questions like this can be anxiety producing.

**Change in the behavior**—Eve decided to change the beliefs that led her to defer to Mike and to become angry as the result of his demands. She had some choices about how to proceed with her behavior. She chose to accept that she deferred out of fear, and to change her behavior by testing whether her old assumptions were correct. She chose to speak up for herself, and if and when this led the other person to

become angry or difficult, she would seek to explore the interaction by examining the mutual assumptions she and the other person had.

Individual double-loop learning works when a person tries to be self-reflective, by which we mean to be in touch with one's feelings. The person has to analyze root causes of his/her own feelings and behaviors, and be courageous enough to accept the premise that he/she is not perfect. However the easy part is that it depends only on one person. In an organization, to have double-loop learning, it would take more parts of the equation. Let us show how double-loop learning would work in an organization.

### Organizational Double-Loop Learning

We worked with a transportation department of a large school district. One of the on-going and expensive problems was that drivers did not report minor accidents with the busses. The risk of not reporting these minor problems sooner, rather than later, was more costly repairs in the long run and risk to children's safety.

#### ***Critical reflection of self-behavior—***

Drivers knew that reporting minor damage and problems would be valuable for the transportation department. Problems could be fixed more quickly and less expensively when identified early on, and there would be less safety risks. But drivers simply would not report damage and problems if they thought they would not get caught. Normally these were honest people, who cared about the children they transported, but acted out of character when it came to damage and problems.

***Identification of values or assumptions underlying the behavior—*** It turned out that the district-wide culture was punitive, and drivers believed they would be punished if they had even a minor mistake. If a driver were identified as having an accident, then HR became involved and required that an insulting warning letter be sent to the driver. The intent of HR was to begin the firing process, if the driver

did not shape up. The organizational value was to protect the district, even though this meant disrespecting the driver.

***Changes in underlying values or assumptions—*** How does an organization change its values and assumptions? The transformative learning had to come at the leadership level first. Actually, the department director disliked the way the district reprimanded people, but he reluctantly went along with the system. For him, the new transformative learning was about refusing to engage in destructive organiza-

for all, the existing mental model. This is very difficult work, at least at first. Schein (2004) explained this difficulty well. He noted that:

Basic assumptions, like theories-in-use, tend to be *nonconfrontable* and *nondebatable*, and hence are extremely difficult to change. To learn something new in this realm requires us to resurrect, reexamine, and possibly change some of the more stable portions of our cognitive structure—a process that Argyris and others

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tional practices and sharing his reasoning with the people above him in the hierarchy. So while the goal was to change the drivers' behavior, the transformation began with the change in the leader's assumptions and behavior, and then communicating this to the drivers through designing new procedures that would support new behaviors.

***Change in the behavior—*** It took a while, but through new procedures, the drivers changed their assumptions about the district, and there is much more self-reporting about minor accidents and problems. In fact, the number of accidents dropped significantly within a year (Conbere, Heo-riadi, & Oestreich, 2014).

To engage in double-loop learning, the members of an organization have to be able to work at the 4th stage of transformative learning, discussed earlier. This is the level, on which the organizational culture change actually happens. The organization that makes people behave differently without changing the mental model that govern employees' behaviors, really does not change its culture. Moreover, the organization has to be open to explore, safely

have called "double-loop learning" or "frame breaking" (Argyris et al., 1985; Bartunek, 1984). Such learning is intrinsically difficult because the reexamination of basic assumptions temporarily destabilizes our cognitive and interpersonal world, which releases large quantities of basic anxiety. (p.31)

So, in order to be truly learning, an organization has to create an environment in which people examine their basic assumptions safely, which in turn, calls for developing the intellectual and emotional muscles that will allow people to release large quantities of basic anxiety from time to time. How do we create such an organization? The work has to be done by an organization on individual and organizational levels, with the help of OD practitioners.

On the individual level, organizational leaders can begin to help employees to become more self-reflective. Because this will raise anxiety for some if not most employees, leaders have to create a climate in which employees believe that they will not be hurt by others if they verbalize their

reflections. Argyris' (2003) model for the development of organizational learning began with having the leader modeling the openness and non-judgmental approach that are essential for double-loop learning. People who take the risk of exposing their beliefs need to feel safe, and this safety begins with the leader.

On the organization level, the culture has to transform to one that supports double-loop learning. To sustain this transformation, three pieces have to be in place: (a) leaders' involvement and modeling; (b) a system that supports the new mental model; and (c) feedback loops to collect valid information. Any organization can create reinforcement for engaging in transformative learning on the individual level, and double-loop learning on the collective level.

And how does the leader learn to do all this? That is the consultant's role, modeling new behaviors and/or coaching the leader. That is why consultants need to be able to engage in transformative or double-loop learning themselves. If the practitioner is not self-aware, reflective, and courageous enough to explore within, then there is little likelihood this person can help others to do the same.

### Formula for Creating a Learning Organization

In a way, developing a learning organization is a simple task. This task calls for creating a climate that rewards openness about ideas, with a bent for examining data and assumptions; and helping people become more self-reflective. What is not simple is getting there. Why? Because to get there means to go through all four stages of transformative learning in a safe manner and get to the place in which new behaviors are governed by the new mental model of being a learning organization. We predict that very often organizations in pursuit of the goal to become a learning organization get only to the second or third stage of transformative learning. They may have introduced new artifacts, perhaps even changed some behaviors, but they still retained the old mental model, in which learning remains single-loop. Being

self-reflective, individually and organizationally, as well as willing to share on this level with others, especially in times of stress or crisis, is not normative in our workplaces. Organizations tend not to like those who "rock the boat."

However, for those who desire to create a learning organization, is there a formula? We offer the following as tasks that are essential for developing a learning organization:

1. Foster a culture that supports transformative learning on the individual level and double-loop learning on the collective level.
2. Develop and promote leaders who support the new culture and transformation process.
3. Develop and promote leaders who are truly receptive to the feedback and risk-taking associated with deep level self-reflection and change. This may require coaching for top leaders. During transformation, and as employees develop critical thinking skills, they may become more likely to challenge the leader, thus, the leader has to be open to being challenged.
4. Encourage and provide opportunities for employees to engage in critical reflection of self-behaviors and apply the double-loop learning framework.

### Conclusion

Our goal has been to describe transformative learning and double-loop learning and their relationship to the learning organization. We suggest that both transformative learning and double-loop learning are attainable, but only with sustained effort that takes into account the changes that must be made on the individual and corporate levels, and the courage to accept resistance and anxiety generated by the very effort.

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