EDUC 891, Spring 2009
Colleen Bell
February 12, 2009

CASE BRIEF: CASE STUDY #18, ABBY CARLIN

1. *Who* is/are the decision maker(s) in the case (you might be one of them) in terms of the work that you are responsible for? (Be sure you include WHY you think someone is a decision maker – what is your evidence?)
2. *What* appears to be the primary issue(s) (concern, problem, challenge or opportunity)? What has happened or what situations have arisen because of this issue(s)? (Be sure to provide evidence from the case or your reasoning here)
3. *When* do I have to decide, resolve, act or dispose of this issue(s)? Is there urgency? (Provide evidence from the case)
4. Have I (or others) already taken any steps to resolve the issue(s)? If so, what are they? Have they been successful – why or why not?
5. Specifically *how* will you proceed from here? For each point, be sure that you provide the reasoning behind your thinking and how it directly links to the primary and secondary issues you have identified. Be precise about how you will proceed – what will you do first, second etc.

Date: February 12, 2009 10:59am
To: Joyce Abbot <joyce.abbott@lt3.com>
From: Abby Carlin <abby.carlin@lt3.com>
Subject: FDW Project: Next Steps (Task Analysis)

Dear Joyce,

Thanks again for helping me the other day. Creating the list of needs and constraints helped me clarify my thinking, even if the list of constraints was much longer than the list of needs.

Before my next visit to the FDW plant, I wanted to share my thoughts with you about where to go from here. I'll be sharing them with Andrew Thomas, the plant manager, but my suspicion is that he'll accept whatever I give him, as long as it can be done with the next 90 days and doesn't affect production – he's made those constraints clear several times. He knows that much of the training will need to take place on the factory floor (in fact, he told me that the new employees will have to learn to operate the machines in a hands-on environment), but beyond that my sense is that his primary concern is the timeline and production schedule. You've given me primary responsibility for this project, but I do want to make sure that you, as VP for design at LT3, are OK with my plan.

As you know, in 3 months the plant will experience an almost complete turnover in employees. Most of the current plant workforce, many of whom have been with the plant for 30 years,

accepted a retirement buyout from the company, leaving Andrew (or rather, us) with 3 shifts of new employees to train before the turnover is complete.

The new employees have no experience operating the blanker machines, although some of them are transferring from other FDW departments. But because of the number of applications for these positions, Andrew was able to hire the best of the best.

Andrew himself has never completely mastered the procedure. Because this is a psychomotor skill based on procedural learning, the new employees will need to learn by doing – on the machines themselves – but at the same time the plant must maintain its production levels. I'm left wondering how, if the plant is in full production with 3 shifts of experienced employees, the new employees are supposed to get enough time on the machines to learn the procedure. I suppose that one's of the problems I need to resolve (although I'm not going to worry about this at this point – I'm not ready to propose a design).

The plant floor has some considerable drawbacks for training. The noise of the machines, coupled with the safety requirement that employees wear earplugs, makes verbal communication virtually impossible. In addition, the low lighting on the plant floor and tinted safety glasses make it difficult to see what's going on. On a positive note, there is a break room on the plant floor that the employees can use when they need to have conversations.

Andrew has been really great at giving me access to the employees. On my first visit, I met Big Jon, one of the retiring machine operators, who allowed me to observe him. He's obviously been doing this so long that his movements are automatic. Because of the noise, he couldn't really explain what he was doing (even if he wanted to, which I'm fairly certain he didn't), and he seemed unwilling to slow down so that I could take notes on what he was doing. The lighting was so bad and he moved so quickly that I couldn't see which buttons he was pushing.

Andrew has told me not to expect assistance from the retiring employees in training the new ones – they know they're leaving, and they are not interested. But they are the only ones who know how to operate the machines, so they are the key to my ability to design and conduct the training.

My next logical step is to figure out exactly what the machine operators are doing – I need to be able to describe the entire procedure, step-by-step. I've tried doing this by taking notes as I observe, but I'm missing too much. I'll need to videotape the operators to capture their movements; in this way, I can use replay and pause to capture all of the steps (or at least as many as I can observe) in the procedure. I think some photographs of the machines, particularly the control mechanisms, will help with this as well – I can refer to them when I'm trying to figure out which button the operator is pushing. The lighting on the floor may be too dim for videotape, so I'll need to make sure I bring some additional lighting.

Ideally, I'd like to videotape 2 or 3 different operators. I'm not sure if the procedure varies according to certain conditions, so observing different operators will allow me to capture any discrepancies.

I'm also hoping I can convince some of the operators to view the videotapes with me and talk aloud through them. I can capture the steps, and can even note differences between the procedures followed by different operators, but I won't be able to figure out *why* these differences occur. It would be great if I could get 2 or 3 of them to view the videotapes together – when there's disagreement, I'll be able to get the operators to explain why. Perhaps I can convince Andrew to authorize overtime pay for their assistance, since it would likely have to be after their shift, or perhaps he has some good ideas about what would be appropriate – I wonder how food works as an incentive with these guys.

Finally, I'm wondering if Andrew would consent to allowing me to try operating one of the machines (supervised, of course). This would certainly give me an opportunity to see if I've captured the procedure clearly enough to explain it to someone else. And it would give me confidence that I'd be ready to design the training.

Speaking of which, although I'm not yet ready to suggest a design, I can't help jumping ahead. Since my opportunities to gain assistance from the current machine operators are likely to be extremely limited, I should probably videotape them during these review sessions. It may give me material I can use during the actual training, perhaps in conjunction with the videotapes of them operating the machines.

Again, this is leaping ahead to the design phase, but I suspect that I'll need to develop some visual materials for use on the floor. Verbal instruction will be impossible, but the new operators will need guidance while learning to operate the machines and I suspect that visual aids will be invaluable. Will I be able to get some graphic design assistance from LT3?

And there's still that tricky issue of training new employees on machines that are in use by current employees engaged in maintaining plant production levels… I'll have to ask Andrew for his thoughts on the issue – I may be making unfounded assumptions.

I feel like I've made some good progress to date, but at the same time there's still so much to be done before I can begin training, and our deadline, now less than 90 days, is looming large in my mind. Can you think of anything I've missed? Once I get the go-ahead from you, I'll be ready to talk to Andrew.

Thanks,
Abby

Notes from Class Discussion

Remaining questions from analysis:

- Resources
- Incentives
- Facilities (rooms for training)
- Equipment
- How will new workers get access to machines for training while production is maintained
- Any down time with machines that can be used for training
- Any product manuals (machines are 60 years old)
- # of new employees
- When do new employees start?
- Any overlap between retiring and new employees?
- Access to new employees? (knowledge levels, characteristics)
- Newer machines?

Task Analysis:

Use bulletin board in break room to invite workers to comment, critique, review procedure for operating machine

Thinking back to Xerox repairmen, do workers talk about operational issues during breaks? Would it be good for me to take breaks with the workers or somehow capture that chatter?