

# Overcoming barriers to Performance Centered Design

BY: Greg Wisener

BSU IPT 563: Job Performance Aids and EPSS

## **Introduction:**

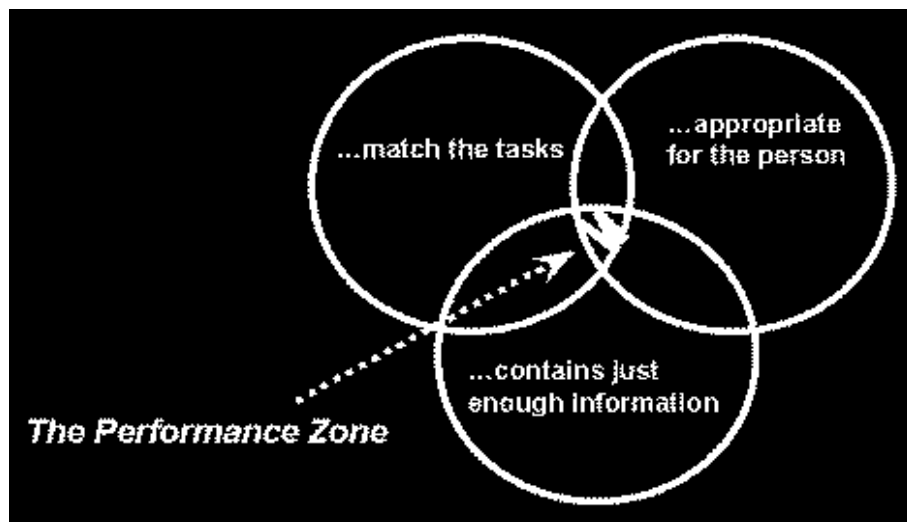
This paper explores the barriers to Performance Centered Design (PCD) of Electronic Performance Support Systems (EPSSs) and offers suggestions to overcome those barriers. It begins with a very basic explanation of what good PCD entails. Next, it will present a summary of the barriers encountered by various PCD professionals. Finally, the paper will offer a summary of strategies to overcome those barriers.

## **Performance Centered Design of EPSSs:**

Like Human Performance Technology, the purpose of Performance Centered Design is to achieve optimal human performance, using the most effective method. PCD is a methodology for designing the most effective electronic systems to enable humans to perform.

“The goal of an electronic performance support system is to provide whatever is necessary to generate performance and learning at the moment of need. (An EPSS) integrates information, tools, and methodology for the user.” – Gloria Gery (1991)

Gary Dickelman identifies three essential elements of a Performance Centered system, below (Figure 1).



**Figure 1: The performance zone for EPSSs (Dickelman, 2002)**

The key here is that the system is focused on performance, on business results. Although it must be designed to accommodate diverse performers (people), and must work within the limits of available technology, a successful system focuses on business performance – accomplishment of the mission and goals of the organization.

## **An overview of the Performance Centered Design process:**

Performance Centered Design requires a process of analysis, testing, evaluation, and improvement that takes time, costs money, and represents significant effort. The typical steps of PCD are as follows:

1. Create process models to reflect the business processes the EPSS will support.
2. Create diversity models, fictional personas to reflect the capabilities and limitations of the type of people the EPSS will support.
3. Create knowledge objects and hypertext to reflect the task content.
4. Map the hypertext to reflect the process/task.

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5. Conduct formative evaluation.
6. Make corrections and repeat the design process until it provides optimal support.

Figure 2, below, provides a general overview of the steps required for Performance Centered Design.

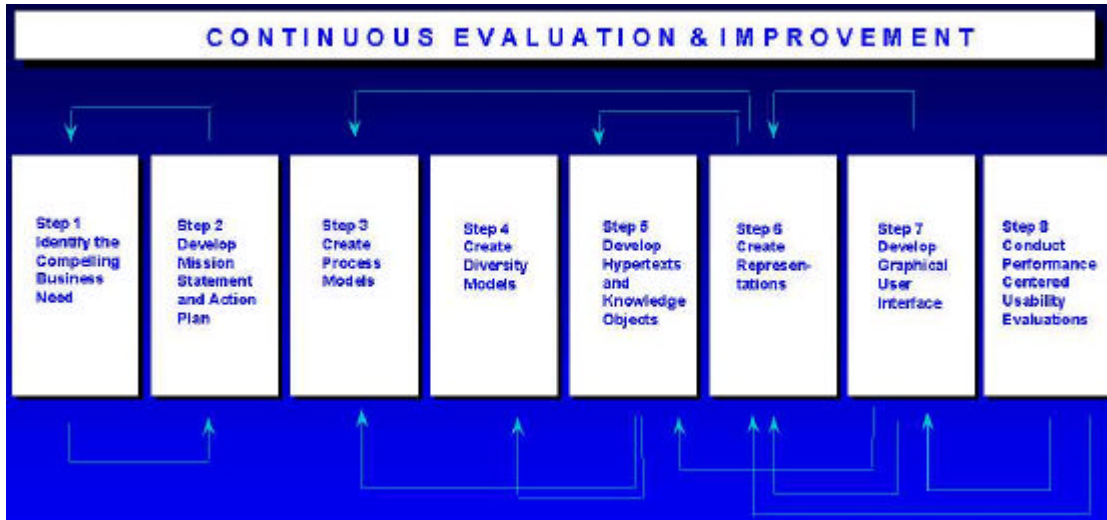


Figure 2: Overview of the PCD process (Dickelman, 2002)

## What roadblocks does PCD face?

In the following paragraphs a summary of barriers to the use of PCD is provided. This is a compilation of the experiences of the leading professionals in PCD.

*Gerry Puterbaugh's hierarchy of objections (As cited by Stan Malcolm, in Notes, 2002):*

1. **Technological roadblocks:** These objections are along the lines of "you can't do that with our technology/infrastructure." Often, technological roadblocks mask concerns that are really organizational or political in nature.
2. **Organizational roadblocks:** "It's not your job to do that!"
3. **Philosophical roadblocks:** "I don't believe we should do that."

*Stan Malcolm's (Notes, 2002) list of barriers:*

1. Change makes people feel incompetent, until they gain new competency.
2. Lack of understanding of EPSS/PCD.
  - a. Many products claim to be EPSSs and they are not.
4. People choose not to understand EPSS/PCD
  - a. See it as a threat.
5. EPSS/PCD requires a cross-disciplinary approach. Thus, ownership is unclear and champions are few and far between.
6. Politics
7. Decision making not always based on logic.
8. Lack of consequences for poor performance of internal systems/projects that support internal processes/performance (means that yield means).

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9. PCD/EPSS advocates are brought in at the end of the design project; too late, after key decisions are made.
10. Existing (legacy) systems have inertia. Often, organizations choose to build on them instead of designing from scratch using PCD.

*Janet Cichelli's observed barriers (Notes, 2002):*

1. PCD should be involved throughout the design process, but rarely is. PCD is thought of as an extra expense.
2. Lack of perceived need/consequences for using/not using PCD.
3. PCD costs more money; Return On Investment is unclear.
4. PCD can take too much time; analysis paralysis.
5. Organizational barriers; perceived turf encroachment.

*Debra Partridge's (Notes, 2002) thoughts on barriers to PCD:*

1. Marketing department drives design based on perceived customer preferences, not the needs of the customer's business.
2. Exciting technological features drive design instead of business needs.
3. Marketing drives release date, not time required for good design.
4. Software designers do not experience their products from the point of view of the customers.
5. Poor design is the rule and it relies on documentation, training, and customer help teams as crutches.

*Duane Degler's (1999) summary of barriers:*

1. "Project participants can become defensive at incursions into what they see as their role's specialist area.
2. People (in different disciplines) are using the same terms to describe different things. (For example), an IT task analysis, focused on the data, is different from an instructional systems design task analysis, looking for user skill gaps, which is different still from a business process task analysis, modeling detailed work flows." (pp. 15-19)

*Gloria Gery's sources of resistance (1991):*

1. "Logistics: Time, priority, equipment, technology, etc. are lacking.
2. Economics: The money isn't available or there are higher priorities for expenditure. Or, the costs of the business problem aren't apparent – or aren't being measured. But expense budgets are.
3. Politics: Key player support isn't obtainable, largely because of vested interest in the status quo, perceived or real risks, organizational measurement or reward systems, or lack of access to potential sponsors.
4. Knowledge or understanding: 'I don't understand what you're talking about' or 'I don't see how this will solve our problem.'
5. Skills: 'We don't know how to do this. We lack the ability to create such a thing.'
6. Feelings: 'I don't like this type of thing. I wouldn't want to use such a system myself. Our customers wouldn't like seeing someone go to the computer for information.'
7. Values: 'This is the wrong thing to do. We shouldn't try to support people with machines. Only people can do this type of work well.'" (p. 192)

*Donald Norman's (1999) requirements for Human Centered Development:*

1. "Total corporate commitment – From lowest level worker to highest level management.
2. Organizational changes – So designers and eventual users of the product interact.

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3. A formal, human-centered product process – The formal process that puts the organizational stamp of approval on the process whereby technologists, marketing, and user experience specialists work together in a team, as equal colleagues, from (start to finish).
4. An engineering discipline of human-centered development.

*Gloria Gery's (1991) tactics for gaining support:*

1. Education
2. Demonstration
3. Case studies
4. Enable those who resist by reframing their thinking and expanding their point of view.
5. Involvement of key influential leaders/sponsors.
6. Restructure reward systems to favor EPSS implementation.

*Tom Davenport & Larry Prusak's (2000) "factors leading to knowledge project success:*

1. A knowledge-oriented culture.
2. Technical and organizational infrastructure.
3. Senior management support.
4. A link to economics or industry value (ROI).
5. A modicum of process orientation.
6. Clarity of vision and language.
7. Nontrivial motivational aids." (p. 153)

*Davenport and Prusak's (2000) suggestions for implementation:*

1. "The place to start is with high value (learning).
2. Start with a focused pilot project and let demand drive additional initiatives.
3. Work along multiple fronts at once (technology, organization, culture).
4. Don't put off what gives you the most trouble until it's too late.
5. Get help throughout the organization as quickly as possible
6. Don't talk up your project until you have something to talk about. (pp. 162-164)

*Marc Rosenberg's (2001) suggestions for successfully implementing a new project (The four "C's" of success):*

1. Culture
  - a. Culture building strategies that will work:
    - i. Make the coach or the direct manager accountable for learning.
    - ii. Focus at the enterprise level – Build a critical mass of people who support the use of e-learning.
    - iii. Integrate learning directly into work.
    - iv. Design well and certify where appropriate.
    - v. Pay for knowledge.
    - vi. Everyone's a teacher
    - vii. Get rid of the training noise – this is not the old training program under a new name.
    - viii. Make access as easy as possible.
2. Champions
  - a. According to Rosenberg (2001), the following are "signs your senior leadership may not be serious about e-learning:
    - i. Work is assigned to people already overloaded or who don't have a clue.
    - ii. Support or directives are given without any money.
    - iii. The e-learning budget is always cut first.

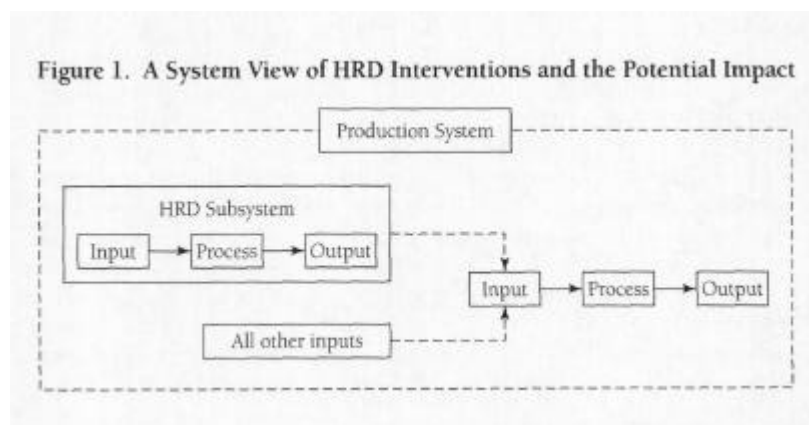
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- iv. Senior managers refuse to learn anything about e-learning.
  - v. (Senior managers) leave it to the team to make ALL the decisions.
  - vi. (Leader) refuses to tell his or her boss about (the project).
  - vii. Does not assign any deliverables or accountability.
  - viii. Believes that going to training is either a perk or a sign of a performance problem.
  - ix. Approves other strategies that undermine e-learning. (pp. 189-192)
- b. How to gain champions in senior management:
- i. Build a sound business case.
  - ii. Use success stories.
  - iii. Educate executives.
  - iv. Coach executives.
  - v. Overcome prior perceptions.
  - vi. Work the politics.
  - vii. Ignore the disbelievers.
3. Communication
- a. Consolidate your strategy development.
  - b. Trash old training communication (support) vehicles.
  - c. Use the web to communicate.
  - d. Avoid selling and focus on value.
  - e. Communicate value from the top down.
  - f. Build support with coaches first.
  - g. Build and promote an initial win.
  - h. Control external messages.
  - i. Encourage web savvy.
4. Change
- a. Don't put change off until deployment.
  - b. One size doesn't fit all.
  - c. Focus on change from start to finish – and beyond.
  - d. Be open and don't oversell. (pp. 179-207)

### **A summary of strategies to overcome barriers to PCD:**



**Figure 3: How a change in Human Performance effects business output**  
(Wang, G., Zhengxia, D., & Ning, Li (2002))

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1. **Make the business case for Performance Centered Systems:** A full court press must be made until Performance Centered Design is a valued process. It is imperative that leaders understand (1) the link between human performance and business output and (2) the potential of performance centered support systems to directly increase output. This is no easy task. Return On Investment (ROI) is difficult to estimate for a system that helps people to accomplish internal processes. While some of the value of a well designed EPSS can be documented, much of it can not. It is difficult to measure, for instance, the ultimate value of the impact a good EPSS will have on an employee's attitude, creativity, curiosity, and general morale. The EPSS community should take advantage of current accounting efforts for non-tangible assets. Tools now exist that attempt to measure the intangible benefits of human performance improvement interventions, like EPSSs. These tools include the HR scorecard (Becker, Huselid, and Ulrich, 2001), some leisurely formulas offered by Wang, G., Zhengxia, D., & Ning, Li (2002) to describe ROI of a single performance intervention, and Leif Edvinsson's work in measuring the value of "intellectual capital." (Edvinsson, (1997)). Using these methods, a case study that illustrates a healthy Return On Investment from an EPSS would be a powerful tool to help convert senior management into champions of PCD.

"One had to cram all this stuff into one's mind for the examinations, whether one like d it or not. This coercion had such a deterring effect on me that, after I had passed the final examination, I found the consideration of any scientific problems distasteful to me for an entire year."

"Teaching should be such that what is offered is perceived as a valuable gift and not as a hard duty ."

"The only source of knowledge is experience"

"Things should be made as simple as possible, but not any simpler."

- **Albert Einstein**

2. **A better alternative to training:** Every competent professional knows that real learning occurs on-the-job, not in the classroom. We need to appeal to that universal truth. Place any group of leaders in the room, and ask them if classroom training alone (without further use of documents, coaches, mentors, etc.), has ever completely prepared them for a job. Your risk is low, the answers will be "no." Trouble is, we have never had an alternative to training for exposing people to new information. Now we do – EPSS. A Performance Centered EPSS will provide the right information, at the right time, to the right people, in order for them to perform. People can now have access to information and knowledge on the job, which will lead to personal knowledge and competency.

Personal competency = information (EPSS) + knowledge  
(EPSS) + experience (on the job)

3. **PCD experts should work themselves out of a job:** Gloria Gery mentions that "there is no logical home for (PCD)." (Notes, 2002). Currently, PCD professionals are considered to be outsiders by both the Information Technology and Marketing communities. As a result these communities throw up technological, organizational, and philosophical barriers. They are acting to counter what they perceive as an intrusion by PCD. In reality, PCD is a tool that can help these professionals to achieve the goal of optimal human performance. Performance Centered Design should become standard practice for all stakeholders involved in the development of an EPSS. If

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they use PCD, internal designers will realize greater ROI and external designers will have a more satisfied customer. PCD professionals should do whatever it takes to ensure all stakeholders are experts in the use of PCD. PCD'ers should use every project as an opportunity to demonstrate the value of PCD. They should have "elevator speeches" ready to go and examples of success ready to draw from. In some cases, it may be appropriate to design an EPSS that guides stakeholders, in all departments, through their part(s) of the PCD process; an EPSS to help people design performance centered EPSSs!

4. **The EPSS community should take on the role of salesman:** The community should come together to compile case studies of successful PCD, highlighting Return On Investment and the Opportunity Cost of not using PCD. Support organizations like ISPI and ASTD can do more to support PCD via their publications, conferences, and web sites. Like Human Performance Technology itself, PCD should take its place as an important part of the leadership and management discipline. Improving human performance should be an important part of the curriculums of business schools and omni-present in the pages of business journals.

"Given a negative learning culture and a quality e-learning initiative, the culture almost always wins. (We need a) learning culture, management ownership, and change management." – Marc Rosenberg (2001)

5. **Organizations need to become learning organizations:** Granted, this is not a goal that the average PCD'er can achieve on his own. However, a learning culture is essential to the success of any learning initiative. The organization must clearly value learning. That value should be made obvious through the actions of management, incentives (rewards and consequences), the tools provided (EPSS), and the goals and feedback given.

## **Conclusion:**

Performance Centered Design is a powerful tool. However, only PCD professionals truly understand its value! As a result, PCD continually encounters resistance. It is time for PCD to take its rightful place as an important business process - valued throughout the organization.

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