A Performance Systems Approach to Digital Publishing in Libraries

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Introduction
Electronic performance support tools are used in many workplaces, but digital libraries have not evaluated their potential usefulness. In a pilot project, the Florida State University Libraries developed inexpensive performance support tools for three types of in-house digital publishing. This strategy improved productivity and quality control.

Performance Support Systems
Performance support systems have their roots in performance engineering, instructional systems design and information systems design (Schaffer & Douglas, 2004). Gery (1991) defined an electronic performance support system as:

“An integrated electronic environment that is available to and easily accessible by each employee and is structured to provide immediate, individualized online access to the full range of information, software, guidance, advice and assistance, data, images, tools, and assessment and monitoring tools to permit job performance with minimal support and intervention by others.”

What Kind of D-Publishing?
In 2005, the FSU digital library team selected in-house digital publishing to pilot a Performance Support Tools (PST) solution. In-house digital publishing is a small piece of the library’s digital publishing future (Van de Sompel, et al., 2004), but it remains an under-exploited area as a digital library test-bed. This pilot selected three in-house publishing processes (Digital Library Metadata Production, Special Collections Finding Aids, and Subject Research Guides) that all:

• adhere to pre-defined structures;
• use controlled vocabularies; and
• consume valuable staff time for creation due to complexity

PSS and Digital Libraries
Singhal & Prasanna (2002) provide several reasons why a performance support approach is appropriate for libraries, including:

• It alleviates some of the information overload burden placed on staff
• Traditional training is too expensive and incomplete in many libraries
• Libraries are increasingly interested in job performance requirements
• Without it, knowledge stays in the heads of staff who may leave
• With it, organizations increase retention of knowledge.

Putting Theory Into Practice
Distinguishing an authentic performance-centered systems solution from a more piecemeal application of templates was a fundamental question for the Florida State University Libraries. According to Gery, an authentic performance support system:

• Establishes and maintains a work context
• Aids in goal establishment
• Structures work process
• Structures progression through tasks and logic
• Embeds integrated expert knowledge
• Institutionalize best practice
• Uses natural language
• Visualizes using metaphors
• Provides alternative views interface and/or data
• Provides evidence of task progression

Using these characteristics, the Florida State University Libraries spent considerable time analyzing tasks and workflows, before introducing electronic templates and associated tools into several d-publishing. We learned that the EPSS field is not so much a unified design concept as it is a perspective on designing systems that support learning and/or performing. In other words, deciding what should constitute the system is much harder in practice than in the theory of improving workplace performance.

Results

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<th>MEASURE</th>
<th>EAD PRE-EPSS</th>
<th>EAD WITH EPSS</th>
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<td>Avg. # formatting errors</td>
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*15 documents pre-EPSS; 25 documents EPSS

<table>
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<th>MEASURE</th>
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<td>Avg. # formatting errors</td>
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</table>

*150 documents pre-EPSS; 350 documents EPS

Conclusions
Productivity and quality control improved in each area of digital publishing. Previously common errors in the structure and formatting of documents were eliminated. The project also revealed the absence of a commonly-agreed-upon formal structure for topical research guides, which are produced by many libraries. Possible new R&D?

Literature Cited