Evaluation of an Embedded Program Through the Embedded Ecosystem Framework and Toolkit

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ARTICLE INFO

ABSTRACT

This article provides a theoretical model for understanding embedded librarianship by introducing an Embedded Ecosystem Framework (EEF) and toolkit to evaluate the health of an embedded program in an academic setting. The toolkit measures the tangible services and the intangible relationships with users in embedded programs under the framework's four facets: Actions, Awareness, Perceptions, and Impact. The Actions facet is measured by traditional library reference metrics, while Awareness, Perception, and Impact measures such as program awareness, self-reported academic gains, or service satisfaction are measured by a survey as well as individual and class evaluations. Analysis of data trends can indicate gaps in services provided or utilization of services by specific user groups to encourage more active engagement with their communities. The toolkit is customizable to fit other embedded librarian programs.

Introduction

As the landscape of libraries and information architecture changes, academic libraries and librarians connect with users outside of traditional outreach roles. Many libraries are now integrating librarians through the embedded librarianship model to reach and serve their users. The embedded librarian model can be adapted in different ways depending on the library, the librarian, and the community they are serving. Shumaker (2009) defines the embedded librarian role as "become[ing] a member of the customer community rather than a service provider standing apart" (p. 240).

The subjective nature inherent in how embedded services are viewed and experienced by stakeholders make it a challenge to develop functional and adaptable methods to examine all aspects - qualitative and quantitative - of an embedded program. Teaching and reference statistics alone do not provide context; nor give any indication on the quality of the interaction or the impact on relationship building. User satisfaction and perception also bear consideration and can affect the overall success of an embedded program. These intangible aspects of embedded librarianship are important to measure and track, especially when abiding by the three principles of embedded librarianship defined by Shumaker (2012):

- Building strong working relationships with others in the community (in this case, the academic community)
- Aligning with the work and goals of the community; adopting shared goals with the members of the community
- Making customized, highly valued contributions to the community (p.6)

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This article proposes a framework to help librarians evaluate an embedded program by combining traditional quantitative data metrics with qualitative measures of community relationships. The proposed framework asserts that the tangible and intangible aspects of embedded librarianship can be measured by evaluating four facets: Actions, Awareness, Perceptions, and Impact. Each of these facets is measured by appropriate methods and combined with reference and teaching statistics to give a comprehensive view of an embedded program.

Embedded Ecosystem Framework

According to Weiss (1998), "a program is a theory and an evaluation is its test. In order to organize the evaluation to provide a responsible test, the evaluator needs to understand the theoretical premises on which the program is based" (p. 55). The Embedded Ecosystem Framework provides a theoretical premise to understand embedded librarianship as an integrated and responsive service model that both assesses users' needs and their multiform use of library resources and services. Furthermore, this theory views an embedded program through the lens of an ecosystem in which the chief outcome is to achieve homeostasis, defined as a state of equilibrium between the different but interdependent elements of a group ("Homeostasis,", n.d.). Embedded library programs can be viewed as relying on a healthy balance of services, relationships, and users to maintain homeostasis.

The Embedded Ecosystem Framework is based on the idea that **awareness**, **actions**, **perception**, and **impact** are facets that interact to affect change and ensure the success of an embedded environment (Fig. 1). Each facet is dependent on the others. An **awareness** of embedded programs activates users to utilize services, or **actions**, provided by their embedded librarians. Well-designed and responsive services lead to positive **perceptions** which influence users to seek out librarians for future encounters and encourages them to share their experiences with other potential users. **Impact** refers to various small and large effects that librarian's actions and interactions provide to the user, such as better quality papers, increased self-confidence in searching skills, or the creation of published scholarly works. These impacts, big and small, are the fuel which generate positive perceptions. When librarian actions facilitate user awareness, positive

perceptions, and favorable impact, then the health of the ecosystem is assured.

With this implicit interconnectedness, a weakness or strength in one facet of the framework cannot help but impact the others. Additionally, the overall health of the ecosystem ebbs and flows according to the age of the embedded program and the relative needs of its constituent parts. The age or duration of the program can be a factor as a well-established embedded program will have had more opportunity to engage the community it serves and, presumably, there will be an increased awareness of the program. The needs of the constituents - both the users and the librarians - can influence both the services offered and the level of embeddedness that is appropriate or needed. Thus, the goal of the Embedded Ecosystem Framework is to maintain a balanced system, allowing for variations between libraries and individual embedded areas over time.

There are a number of settings in which embedded librarians may engage as part of a teaching or service community. The complex logistics of applying this model to each potential embedded scenario individually necessitates that this paper limits its discussion to only those examples which involve students and faculty in a traditional university setting. However, this embedded ecosystem model is flexible enough to adapt to a wide range of embedded environments, user groups, and settings.

Actions

Actions make up the first facet of the Embedded Ecosystem Framework and involve any behaviors or services performed by the embedded librarians for their designated user groups. The actions of an embedded program can be measured through the services that librarians provide. In building a successful embedded program, services should align with the user groups' goals and objectives in order to demonstrate value. Nunn and Ruane (2011) assert that "when librarians stress the personalization of reference services, it will have a positive impact on the library image with the user community, and will help users associate a particular trustworthy person—and a successful reference interaction—with the library" (p. 298–299). Personalizing services to a specific embedded area aids in creating trusting relationships between librarians and their user group.

Students' focus is often on completing assignments. Librarians assist in this task through a variety of actions, such as guiding students to appropriate resources, assisting in building effective search strategies, and navigating copyright concerns for dissertations/theses. For institutions with a strong online presence, this may take the form of online reference, LibGuides, or tutorials. Library instruction sessions - both those requested by teaching faculty and those offered by the library directly - are another way to serve students.

Faculty services may focus more on research and teaching as they are often engaged in promotion and tenure milestones. Teaching support can occur through guest lectures or co-teaching courses related to research topics. Librarians may also provide research and publication support by offering current awareness services, such as sharing information and articles related to faculty research interests. Another means by which embedded librarians can support faculty through their actions, and add value to the library as a whole, is through the use of faculty input on the selection of library resources.

Of the four facets of the Embedded Ecosystem, actions is the only one directly controlled by librarians, although they can, through their actions, influence the other three facets. In addition to reference, instruction, and collaborative services, actions can include promotional, networking, and marketing efforts of embedded librarians.

Awareness

Awareness represents the second facet of the embedded ecosystem. This refers to the degree to which users are informed about the types of
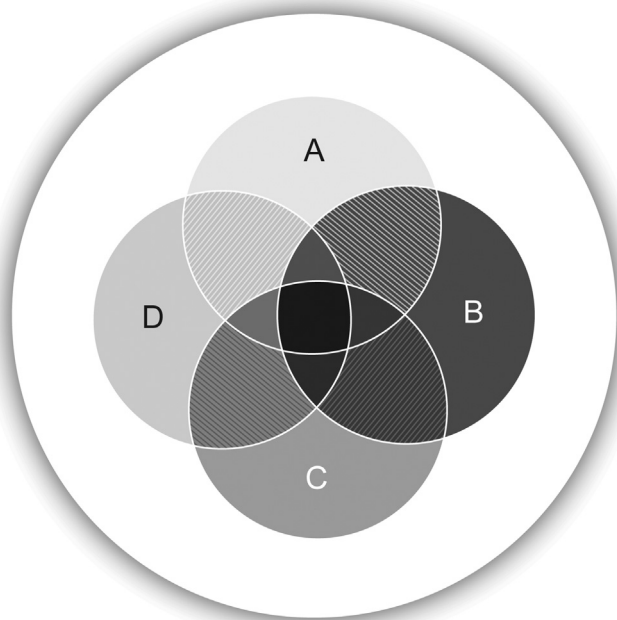
A: Actions | B: Awareness | C: Perceptions | D: Impact

Fig. 1. Embedded Ecosystem Framework.