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Project Title: Phase One of a Developmental Evaluation of a New Master of Science in Product Stewardship Program: Development of a Conceptual Framework for Curricular Mapping

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Project summary and accomplishments

The IU Fairbanks School of Public Health (FSPH) at IUPUI has a new Master of Science in Product Stewardship (MSPS) degree. The courses in the MSPS are currently taught by two full-time faculty members (courses used in more than one degree program) and nine part-time, associate faculty members. This is currently the first and only program of its kind in the country, and it has been developed as the academic response to a recognized need for a new type of professional. This project encompasses Phase 1 of a planned three-phase developmental assessment of early years of the program. The purposes of this project were to lay the groundwork for ongoing developmental evaluation of the program and to establish a baseline against which to track curricular goals and monitor student learning toward those goals. To do this, we set out to create a visual map which depicted the scope of professional product stewardship practice and the relationships among product stewards and other human and non-human actors.

At the conclusion of the project, we have a visual conceptual framework of the functional realm of a product steward, which depicts its fit within broader social and economic systems. This framework was developed through the analysis of interviews with product stewardship stakeholders, participant-checked, and serves as a visual complement to our degree competencies in defining and communicating what a degree in product stewardship could comprise. We applied for and were awarded a Curriculum Enhancement Grant to do the work of curricular mapping and developing student learning metrics using both the map and our degree competencies (Phase 2); this work is currently underway.

Data collection methods and findings

Methods. We conducted 9 individual, semi-structured interviews with program faculty and key stakeholders about the kinds of problems they worked on as product stewards, regulations which bound their work, institutions with which they interacted, roles occupied by people with which they interacted, and how all of these things related to each other. The aim of the interviews was to elucidate key people/roles/institutions/non-human actors (eg., policies/laws) which make up the universe of the product stewardship profession.

Interviews were conducted by the Project Director or her research assistant using video conference or telephone, and were audio-recorded and transcribed. We developed an initial coding scheme to index the data based upon the interview guide, and included additional codes to represent actors, processes, links, networks, and systems. In subsequent phases of analysis, we began to develop a preliminary visual conceptual framework which depicted the actors and their networks within broader systems.

We assessed that preliminary visual using participant checks to confirm the trustworthiness of the analysis of data and summary of results with those who actually provided the data. Their feedback was incorporated to the conceptual framework.

Findings. Our actor-network map is shown in Figure 1. We found, as expected, that the universe of product stewardship is quite complex, with a realm of practice which spans multiple

business units within for-profit companies, non-governmental organizations, the public, communications media, governments and regulators in various countries, and researchers and scientists (actors). In particular, our interviews highlighted the ways in which the structure and scope of professional practice is dictated by the employment circumstances of the product steward (eg., employed by a company as an in-house product steward; an independent consultant who advises companies or business units on product stewardship) and by the level of resources in the company in which a product steward works (pink, blue, and green boxes in figure), which determines the “maturity” of a stewardship program. Finally, the concept of “supply chain” responsibility was central, and extended to include the idea of responsibility for intermediate or non-consumer goods, depending on the employment circumstances of the product steward.

Obstacles and challenges

We encountered several minor challenges in our work on this project. First, while we were able to speak to most of the program faculty for interviews, we were less successful in securing participation than we hoped from stakeholders who are not directly involved in the program itself. While these are speculations, because non-participation came in the form of non-response rather than declining, our sense was that participation was not a priority for the time and focus of practitioners not directly involved in the degree program. We also learned early that the amount of time we had told participants to expect the interview to take was too short. This was because respondents had much information to offer in response to our questions, and while interviewers attempted to use interviewing techniques to manage the pace, interviews were still longer than we planned. Finally, we found that visually representing a complex, three-dimensional universe like the one described by interviewees was challenging for non-graphic artists.

Strategies to address obstacles and challenges

To address the length of interviews, we used what we had learned from preliminary analysis of early interviews. These showed that, while it provided interesting information, one section of our interview guide was not vital to our ability to develop our map. In subsequent interviews we narrowed the range of questions asked in that section of the interview guide. This also served to keep the interviews closer to the length of time we told participants to expect. To address the challenge of visual representation of our results, we also used a small amount of funding to procure the services of a graphic designer in order to improve our initial visual map.

Implications for the program

The biggest implication for the program as it evolves is the degree to which we aim to cover the scope of the product stewardship practice realm. All professional programs must delineate those knowledge areas and skills which will be developed in the program, and those which will be gained over the course of a practice career. Likewise, the degree and depth at which the skills and knowledge addressed in the program will be expected to be demonstrated by students is also a point for iterative reflection and discussion. Such reflection and discussion will be guided by the addition of the map, which makes the realm of practice visual beyond what program competencies state in words.

Figure 1. Actor-Network map for the Master of Science in Product Stewardship degree, Richard M. Fairbanks School of Public Health, Indiana University.

