Designing for Sustained Adoption Assessment Instrument

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Introduction

As part of our work to promote the successful propagation of effective curricular materials and teaching strategies, we have developed an assessment instrument to analyze aspects of project plans relevant to successful propagation. The assessment instrument is divided into four sections:

1. Product Type (Descriptive)
   This section focuses on identifying the basic type of product being developed. It is important to identify this because different propagation strategies will be needed for different types of products.
2. Product Features (Descriptive)
   This section focuses on identifying product features related to how much and what type of effort is required for adoption. It is important to identify these features because the propagation strategy must be matched to these product features to provide the necessary support to adopters. We have allowed for the fact that some project plans do not provide sufficient detail about the product to adequately characterize these features.
3. Specific Propagation Activities Used (Descriptive)
   This section focuses on identifying specific propagation activities that can be used. This is important because a strong propagation plan should include strategies in each of the three categories of development, dissemination, and support.
4. Evaluation of Propagation Plan (Evaluative)
   This section focuses on identifying the degree to which the project plan has used strategies that have been identified in the literature as necessary for or supportive of successful propagation. In this section, a low score indicates that there is little evidence that the project team is following best practices and a high score indicates that there is clear evidence that the project team is following best practices. The assessment instrument represents ideal goals, which may not be feasible for all projects, particularly those at the pilot level or with small budgets.

The intention is that **the entire project plan will be used to provide evidence for the analysis of propagation strategies**. This is because many of the activities that should be undertaken to position a product for successful propagation occur throughout the life of the project, not just in the "dissemination" phase.

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I. Product type (Descriptive)

Pick **one** of the following. Select the major category (e.g., C1, C2, …) if the subdivisions don't quite fit or multiple aspects fit.

Goal: Developing/Propagating a specific curriculum and/or pedagogy	
C1. Implementation does not require substantive change in pedagogy or course content	C1A. Technology to make existing instructional activities more efficient
	C1B. Organized learning activities that happen outside of class (but connect to a particular class)
	C1C. Organized learning activities that are not connected to a particular class
C2. Implementation requires use of new course pedagogy	C2A. Flexible instructional tools to promote engagement in the lecture or laboratory. Use requires less than one class period and tools are often used regularly
	C2B. Activities designed to take one class period (i.e., to replace a lecture or lab activity), but not be used every day
	C2C. Comprehensive change in course philosophy/pedagogy to be more student-centered, but still maintaining many aspects of a traditional lecture or laboratory course
	C2D. Comprehensive change in course philosophy/pedagogy to be more student-centered, with very little or no traditional approach (lecturing or verification labs)
C3. Implementation requires use of new course content	C3A. Rethinking of current course content
	C3B. New course content (topics or technology)
C4. Implementation requires use of new/revised course content and pedagogy	C4. No sub-categories

II. Features of target curricula and/or pedagogies (Descriptive)

For many products, there is a range of degrees to which an instructor could change their teaching practice and the collaboration and resources needed for implementation. Rating this category should be based on the minimal degree of change that maintains the critical features of the product. Unless there is additional knowledge about the target population, ratings in this category should assume that current teaching practices are instructor-centered with an emphasis on lecturing and current classrooms are those designed for teacher presentations.

Factor	Unable to Rate	A	B	C	D
F1. Amount of user modification expected	***Not clear from the project plan*** Insufficient evidence in the project plan to determine	***Completely Prescribed*** Expectation that materials will be used without modification and implementation will look just like what was done by the developers (implement "as is")	***Partially Prescribed*** Expectation that materials and/or procedures will be customized before/during implementation, but still follow set guidelines (change some details)	***Partially Emergent*** Expectation that the materials and procedures will be substantially modified or developed by users and implementation will follow the set framework (may change some principles)	***Completely Emergent*** Expectation that users will be inspired to develop their own principles and design their own materials/implementation since no set framework is provided (must change principles)
F2. Degree of change to teaching practices required by instructors to adopt	***Not clear from the project plan*** Insufficient evidence in the project plan to determine (or, not a course-based program)	***None*** Individual instructors can integrate materials into their class without modifications to their typical teaching approach or syllabus content; no time beyond usual lesson planning is needed	***Some*** Individual instructors need to adjust their teaching approach or make modifications to material normally covered in the syllabus, and spend time both learning about and implementing the product	***Moderate*** Individual instructors need to adjust their teaching approach and the way they run class, modify the syllabus substantially, and spend time learning about and implementing the product	***Considerable*** Individual instructors need to radically change their current teaching approach or course syllabus in a way that is likely at odds with their comfort level; plus spend a substantial amount of time learning about and implementing the product
F3. Degree of cooperation required to adopt	***Not clear from the project plan*** Insufficient evidence in the project plan to determine	***None*** Individual instructors can adopt the innovation with no involvement of other instructors or the institution	***Some*** Requires cooperation of at least one other instructor and may involve departmental or institutional approval	***Moderate*** Requires active involvement of multiple instructors, and likely requires departmental or institutional approval	***Considerable*** Requires active involvement of multiple instructors (possibly from multiple departments) and departmental and/or institutional approval
F4. Degree of resources required to adopt	***Not clear from the project plan*** Insufficient evidence in the project plan to determine	***None*** No additional resources required	***Some*** Some additional resources (e.g., a few small pieces of new equipment, an undergraduate student assistant) may be required	***Moderate*** Requires new resources, such as significant new equipment, restructuring of classroom facilities, or increased staffing needs	***Considerable*** Requires substantial investment of new resources

III. Propagation Activities (Descriptive) - specific actions or things that people will develop directed at propagating

Select all that apply for the appropriate phase of the project (S – Getting started, R – revision, E – expansion)

Development				
		S	R	E
Collect student learning and attitudes data in courses taught by:	**1.** the developer(s)			
	2. non-developer instructors in similar educational environments (e.g. institution type, class size, discipline)			
	3. non-developer instructors in a variety of types of educational environments			
	4. non-developer instructors with characteristics similar to the developer (e.g. demographics, beliefs, experience)			
	5. non-developer instructors with characteristics different from the developer			
Collect instructor use data in courses taught by:	**6.** the developer(s)			
	7. non-developer instructors in similar educational environments (e.g. institution type, class size, discipline)			
	8. non-developer instructors in a variety of types of educational environments			
	9. non-developer instructors with characteristics similar to the developer. (e.g. demographics, beliefs, experience)			
	10. non-developer instructors with characteristics different from the developer			

Dissemination								
		S	R	E		S	R	E
Dissemination through:	**11.** existing website e.g. NSDL, MERLOT				**19.** social networking			
	12. listserv, email lists, etc.				**20.** conference booth			
	13. promotional materials				**21.** textbooks			
	14. project website				**22.** introductory workshop (less than or equal to 3 hours)			
	15. journal publication				**23.** extended, interactive workshop (more than 4 hours)			
	16. white paper (technical reports)				**24.** an advisory board connections			
	17. conference presentation (talks or posters)				**25.** mentoring of graduate students/post-docs			
	18. seminars/colloquiums				**26.** personal connections with other instructors			

Support				
		S	R	E
Support Adoption by developing:	**27.** instructional strategies and/or materials that can be easily modified by users (e.g., as a Word doc).			
	28. instructor guides, implementation guides, or FAQs			
	29. guidelines/advice for implementation in different environments			
	30. materials that can be adopted without taking a lot of instructor time.			
	31. materials in modular fashion that can be adopted piecemeal.			
	32. materials that are similar to what instructor already do			
Support Adoption by:	**33.** Engaging other instructors in development or review of instructional strategies and/or materials			
	34. Creating mechanisms to follow up with potential adopters (workshop attendees, people who download material)			
	35. Leveraging existing instructor development communities (e.g., POGIL, PLTL, SERC, professional societies)			
	36. Individual Consultations			
Other:	**37.** Other:			

IV. Aspects of propagation strategies that influence the likelihood of success (Evaluative)

In this section, a low score indicates that there is little evidence that the propagation plan is aligned with best practices and a high score indicates that there is clear evidence that the propagation plan is aligned with best practices.

Aspect	1	2	3	4	5
A1. Intended audience is identified (who makes the decision to adopt the product)	***No***	***Yes – general*** Description of intended audience is very general (e.g., chemistry faculty)	***Yes – limited info*** Intended audience is identified using some details (specific institutions or types of instructors) but there is little or no description of why they were selected	***Yes - specific*** Intended audience is identified with a brief description of why they were selected for the product	***Yes–detailed*** Intended audience is identified with a clear description of why they were selected for the product, and the size of the audience is estimated
A2. Propagation strategies engage intended adopters	***Not at all -*** Passive means (conference/meeting presentations, journal articles, websites) are the primary communication channels	***Very little -*** Passive means (conference/meeting presentations, journal articles, websites) are the primary communication channels, although there is some indication of targeting groups of potential adopters or brief introductory workshops	***Some -*** Passive means are the primary communication channels, but there is some discussion of targeting potential adopters and obtaining feedback about usability, or conducting short introductory workshops with detail on what the workshops will contain	***Moderately -*** Passive means of communication are accompanied by plans for detailed, intensive workshops or other mechanisms to actively involve potential adopters	***Significantly -*** There is an extensive plan for attracting, training, and supporting and/or following up with potential adopters
A3. Project begins to address issues of propagation from the very beginning of the project	***Not at all -*** It is clear that dissemination/propagation won't be addressed until the project is complete or nearly complete	***Very little -*** Brief indication developers are thinking about making the product useful	***Some -*** Some discussion of how developers will determine what potential adopters may want/need to find the product useful	***Moderately -*** Identification of barriers to adoption and how they will be addressed through design or data collection during development	***Significantly -*** In addition to identifying what will be useful and how barriers will be overcome, there is a plan for formative feedback from the intended audience during development

Aspect	1	2	3	4	5
A4. Propagation strategies consider the different aspects of the instructional system	***Not at all -*** No evidence the developer has thought about instructional system elements and the type of changes required for adoption	***Very little -*** Little indication the developer has identified instructional system elements involved for implementation, but there is evidence that local factors impacting adoption have been considered	***Some -*** Developer has identified one of the following instructional system elements that are likely to impact adoption: decision makers, local factors, interpersonal networks, department or institutional cultures	***Moderately -*** Developer has identified some of the following instructional system elements likely to impact adoption: decision makers, local factors, interpersonal networks, department or institutional cultures	***Significantly -*** Developer has identified the following instructional system elements likely to impact adoption: decision makers, local factors, interpersonal networks, department or institutional cultures
A5. Level of thoroughness in propagation strategy	***Very low –*** No approaches are identified (no explicit section on dissemination or propagation)	***Low –*** Approaches are identified, but little detail is provided as to the rationale or how the efforts will be accomplished	***Moderate –*** Approaches are identified with some indication of how they will be accomplished, or the rationale behind strategies can be inferred	***High –*** Approaches are identified with sufficient detail and discussion of the rationale behind the choices; some information is provided for how the plan will be accomplished	***Very High –*** Approaches are explicitly described, including a detailed rationale for strategies chosen, and how the plan will be accomplished
A6. Propagation strategies depend on the type of project	***Not at all -*** There is no indication that the developer has thought about the match between strategies and the type of project or how best to reach potential adopters	***Very little -*** There is no indication that the developer has thought about the match between strategies and the type of project other than thinking about how to make materials available	***Some -*** There is some indication that the developer has thought about the match between strategies and the type of project in addition to making materials available	***Moderately -*** Developer has considered some features that influence adoption and has made some attempt to align propagation strategies to meet those conditions	***Significantly -*** The developer has considered potential adopters and features that influence adoption, and used this information to design propagation strategies