Strengthening OA practice: Using intervention logic to support drives for change

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Summary

The aim of the JISC Open Access (OA) Pathfinder programme is to "*develop shareable models of good practice with regard to implementation of research funders' OA requirements".* With the sector-wide shift to OA and with growing funders' OA mandates, the Pathfinder scheme reflects a real need to enhance compliance with the agenda. Fundamental to this project is understanding how people approach OA, and how processes can be designed to address this. This brief paper summarises an approach to building stronger institutional approaches to Open Access using intervention logic. The process, drawn from a behaviour change intervention framework supports research management and library staff to explore the key areas of change needed and consider how best to address these. A tool is supplied at the end of this document to support this process.

Context

Building engagement with an institutional or sector wide directive can be challenging. When new requirements (eg. OA) are announced, institutions often and understandably shift attention to systems and processes via which to comply. A clear OA example is the directive to comply by depositing articles within 3 months of publication[1] and the establishment of institutional repositories accordingly. However, simply having a system in place is rarely sufficient to engage academics and trigger a new routine behaviour. Thus, there is a parallel stream of behaviour change needed to ensure OA becomes 'the norm'. As a research manager, librarian, repository officer or any other such role tasked with delivering OA, it can be very challenging to engage across the academic community and do so without tension. Drawing on behavior change science can help strengthen approaches and reduce difficulties in implementing solutions.

Behaviour change

The science of Behaviour Change (BC) has evolved to understand (and tackle) how and why people act in certain ways. Only by understanding and addressing the underlying drivers (or 'determinants') of actions can significant and sustained change be made. Behaviour change theories can provide insight into (i) why people differ in their behaviour and (ii) how to most effectively address this.

A fundamental tenet of behaviour change is that *'knowledge is essential but not sufficient'* for people to change their behaviour. Often we assume that the existence of a requirement and knowledge about it is enough to trigger a change. However, this ignores the broader and more complex way people think. Behaviour change theories applied to OA for instance would suggest that influences also include such aspects as:

- **Attitudes** (*"Do I think OA is a good or bad thing?"*)
- **Feelings of control, confidence or self efficacy** *("Do I know how to publish via OA and can I do it?"*)
- **Perceived ability to overcome practical barriers** *("can I find the money to publish OA?"*)
- **Social norms** ("*Do my peers publish OA?")*
- **Cues to action** *("What would remind me to publish OA?")*

[1] See http://www.hefce.ac.uk/rsrch/oa/

- **Motivational readiness** ("*Am I ready to shift from traditional to OA publishing?")*
- **Perceived severity of *not* complying** *("What will happen if I publish behind a paywall?")*
- **Habit** ("*How have I always published?"*)
- **Costs / benefits** ("*What are the advantages / disadvantages of OA publishing"*)

BC does not imply that responsibility rests solely with the individual (as institutional support is crucial), but does offer insight into how institutional strategies for OA can be successfully implemented. Institutions – and those driving the agenda internally – should be mindful of the need to:

- **Define the behaviour(s)**. 'Comply with OA' may be the goal but this is actually a combination of behaviours such as choosing a journal which offers the appropriate Gold/Green route; applying for internal APC funds; depositing on an institutional repository. The more specific you can be in what actions are needed, the more successful you'll be
- **Review how the institution facilitates or hinders OA processes** i.e. what can be done to develop a supportive context? What systems are missing or too awkward to use? Where are the bottlenecks in the system?
- **Choose training and engagement techniques which meet people's needs** i.e. improve knowledge alongside addressing individual concerns and misperceptions

Integrating behaviour change and intervention logic into institutional approaches

Behavioural intervention approaches teach us that to make real changes, approaches need to address the underlying problems. More specifically they can help us effect change by understanding reasons for non-behaviour, having a clear direction of what is to be achieved and how, and doing so in reflection of the context. The key is to look at the problem from the users' perspective to minimise frustration and resistance. Fundamentally, any approach will have limited effect unless:

- It is tailored to the people involved and the setting
- It is based on an understanding of the current state and the reasons why the change you're seeking isn't yet happening
- It uses the methods most appropriate to making the change
- The process of implementation is planned
- People are involved
- It considers the changes across different teams and levels of the university

Intervention Mapping[2] (Bartholomew et al, 2011) is a framework developed to support the design and implementation of health focused programmes. It is a logic based approach which starts from basic principles (understanding the problem), through to the design of a programme to achieve the desired change. The principles of Intervention Mapping can be applied to any area in which change is needed by considering:

- What the **problems** are
- What a better situation would look like (**goal**)
- What (and whose) **knowledge, attitudes and processes** would help achieve the goals
- What **activities**/approaches will most effectively produce the changes

[2] Bartholomew, L. K., Parcel, G. S., Kok, G., & Gottlieb, N. H. (2011). *Planning health promotion programs: an intervention mapping approach*. John Wiley & Sons.

Intervention Mapping process summary table

Steps	Aim	Example tasks
Step 1 **Needs assessment**	Determine the problem from stakeholder perspectives	• Conduct the needs assessment Establish a participatory planning group • Assess community capacity • Specify program goals for health and quality of life
Step 2 **Program objectives**	Convert problems into goals and determine the discrete changes needed to achieve a clear overall solution	• State outcomes for behaviour and environmental change • State performance objectives • Select important and changeable determinants • Create a matrix of change objectives
Step 3 **Theory based methods and practical strategies**	Determine the most appropriate and effective methods to make the changes	• Generate program ideas with the planning group • Identify theoretical methods • Choose program methods • Select of design practical applications • Ensure that applications address change objectives
Step 4 **Program plan**	Assemble into a coherent programme to achieve the change	• Consult intended participants and implementers • Create program themes, scope, sequence and materials list • Prepare design documents • Review available program materials • Draft program materials and protocols • Pretest program materials and protocols • Produce materials and protocols
Step 5 **Program Implementation**	Assess and plan implementation within the context	• Identify potential adopters and implementers • Re-evaluate the planning group • State program use outcomes and performance objectives • Specify determinants for adoption and implementation • Design interventions for adoption and implementation
Step 6 **Evaluation plan**	Determine how you will assess if it has been successful	• Review the program logic model • Write effect evaluation questions • Write evaluation questions for changes in the determinants • Write process evaluation questions • Develop indicators and measures • Specify evaluation design

OA tool

The following abridged approach draws on intervention development techniques to enable research support staff to better understand the areas they need to change. By breaking down the topic into its component elements, you can determine the solutions available and choose the most appropriate means to address them. The framework is not restrictive, but seeks to help you structure your approach. Intervention development is iterative and focuses on making the clearest sense of the context and how people engage. Use the framework as a support tool not a prescription. The purpose of this process is to unpack the problem into its component parts and thus identify smaller scale goals to overcome it. Through doing this process you should have a far clearer strategic overview of how to reach a successful end state. Follow the steps as below to build your plan.

Planning Process

Use the 'Mapping Grid' for this process. An example grid is provided after for reference

		(Example)
1. **Clarify the problems.**	In column 1 list down all the problems with delivering OA (across all levels of the institution)	*Academics don't deposit article on acceptance*
2. Convert problem into goal.	In column 2 convert the problem into a positive, discrete achievable goal. This is the positive state you want to have achieved	*Academics to self-deposit articles within 3 months of acceptance*
3. Determine contributing factors.	Think through the possible reasons why problem behaviour (1) is happening and thus the goal you need in columns 3-5:	
	Knowledge: Is there a gap in knowledge that's contributing to the problem? Whose lack of knowledge? If so what do people need to know?	*Academics know about the HEFCE 3 month ruling for REF eligibility*
	Attitude: Is it an opinion, belief or view on what others do which is influencing behaviour? Whose attitude? If so, what attitudes to people need to hold to address this?	*Academics view depositing within 3 months as the norm*
	Systems / process: Is there something technical, practical or organisational contributing to the problem? What is needed to enable people to act well?	*Institutional repository has clear deposit process*
4. Plan actions	Now you've determined what the problem is and what changes are needed to solve it, plan your actions. Consider approaches, techniques or strategies[3] to achieve the goals,	*Knowledge: information provision, run workshops, briefings, myth-bust, coordinate mixed messages….* *Attitudes, get endorsed by influential voice (eg. Head of Department, ,emphasise how 'normal' it is across the sector……*

Repeat for all behaviours

[3] NB: there is no prescriptive list. Remember to look at methods which address the particular problem not just the overall goal

MAPPING GRID

Problem	Goal (positive phrase)	GOALS OF CHANGE *Knowledge*	*Attitude*	*System / process*	ACTIONS

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EXAMPLE MAPPING GRID

		GOALS OF CHANGE			
Problem	**Goal (positive phrase)**	***Knowledge***	***Attitude***	***System / process***	**ACTIONS**
Academics don't deposit article on acceptance	Academics to self-deposit articles within 3 months of acceptance	Academics know about the HEFCE 3 month ruling for REF eligibility	Academics view depositing within 3 months as the norm	Institutional repository has clear deposit process	Info provision: all staff email, deposit guide, training Changing norm: clear institutional message from leadership and through faculty leads on OA as default System: add new button to dashboard 'deposit here'
Academics unknowingly choose a journal which does not comply with REF embargo periods	Academics to choose a journal which complies with REF panel embargo periods	Academics to know the relevant embargo period and be able to find the embargo information on publisher's websites	Academics to feel it is their role to find embargo information	Embargo checking service available via staff information pages	Add in embargo checking service Clarify roles for checking etc and communicate via training and staff communiques
Lack of translation of library based OA activities to academic community	Library to effectively communicate expertise, services and processes to academic community	Library staff to know what processes/information are needed by academics Library staff to be able to translate material in academically-friendly messages	Library staff to feel it is their role to translate and communicate across the institution Library staff to feel able to engage the academic community	Strong library presence on staff pages to raise awareness and convey expertise	Engage researchers to help translate materials / messages
No funding available for OA	Academics to comply with OA through a mix of Gold and Green routes	Academics to understand Gold vs. Green routes Academics to understand Green is still REF compliant	Academics to understand OA does not always require funding Academics to view Green as acceptable	Clear decision process for obtaining limited institutional Gold funds	University leads to establish clear process to obtain Gold fees when appropriate Comms strategy: Institutional message from leads on OA funding position

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