Michal Sedlacko; Julia Dahlvik

Training civil servants for transformative practice: A process model of research-oriented learning

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Abstract

The victorious march of evidence-based policy making is leading towards increasing preoccupation of public administration (PA) and policy systems with science and the knowledge that is its product. Beside issues of institutional design this has implications on competence of civil servants and public managers and their training. In this contribution, we reframe the use of scientific knowledge as part of practically grounded inquiry to guide teaching of academic thinking and scientific work in mid-career programs of public administration and public management. The aim of the paper is to discuss possibilities of training civil servants for transformative practice through a process model of research-oriented learning. Our discussion is based on theories of knowing and learning in everyday professional practice (Schön 1984 and Raelin 2007, among others), Dewey's (1916) conception of 'scientific temper', as well as several approaches to learning, including 'learning by research' (Künzel 2016), 'problem-based learning' (Weber 2006), and Experiential Learning Theory (Kolb 1984). In this context, scholarly competence is framed as a meta-competence closely linked to problem solving. The paper sketches outlines of a practically useful and transformative post-structuralist and critical science and its didactics in the context of professional degree programs aimed at civil servants and public managers. We extend the concept of 'scientific temper' from epistemological into ontological territory, suggesting a new kind of science resting on post-constructivist and post-structuralist foundations. Each scientific account, through its theoretical and methodological 'apparatus' (cf. Barad 2003) enacts a specific reality, especially when in line with criteria of credibility and legitimacy valid for a particular scientific community. Thus science does not speak an objective truth about a singular reality but instead enacts multiple more or less powerful realities that frame how a specific problem may be constructed and addressed. It influences the distribution of power and resources in society and is inherently political. The practitioner should thus nurture awareness of the political implications of the choice of a way of looking at the situation.

Keywords:

Civil servants, learning by research, process model of research-oriented learning, practically grounded inquiry, scholarly competence

Introduction

The victorious march of evidence-based policy making is leading towards increasing preoccupation of public administration (PA) and policy systems with science and the knowledge that is its product. Beside issues of institutional design this has implications on competence of civil servants and public managers and their training. In this contribution, we reframe the use of scientific knowledge as part of practically grounded inquiry to guide teaching of academic thinking and scientific work in mid-career programs of public administration and public management. The aim of the paper is to discuss possibilities of training civil servants for transformative practice through a process model of research-oriented learning. Our discussion is based on theories of knowing and learning in everyday professional practice (Schön 1984 and Raelin 2007, among others), Dewey's (1916) conception of 'scientific temper', as well as several approaches to learning, including 'learning by research' (Künzel 2016), 'problem-based learning' (Weber 2006), and Experiential Learning Theory (Kolb 1984). In this context, scholarly competence is framed as a meta-competence closely linked to problem solving. The paper sketches outlines of a practically useful and transformative post-structuralist and critical science and its didactics in the context of professional degree programs aimed at civil servants and public managers.

In modern liberal democracies, public administration as the central apparatus of the state is closely entangled with scientific knowledge and the structure of the scientific field (Sedlacko 2016). Both scholarly competence and scientific knowledge use are unevenly distributed and institutionalised across public administrations, with scholarly competencies in numerous tertiary PA/PM education programs aimed at academics rather than practitioners (ibid.). Nevertheless, there is little consensus on the implications of evidence-based decision making – in public policy or in the organisational context of public administration – at the level of actual practice and institutionalisation of competence requirements. We suggest that science, utilised with a *different stance*, can make a significant difference in how a PA professional goes about solving practical problems in everyday work.

The position advocated here stresses particular ways of incorporating scientific knowledge in practical problem solving and potentially also framing this endeavour in a research context. Practical problem solving involves development and testing of practical schemes or theories-in-action, where such schemes and theories should incorporate scientific 'instruments', i.e. theoretical and methodological tools for construction of explanatory accounts. Professionals should thus treat formalised, explicit and decontextualised scientific knowledge as inherently problem oriented and as a practical 'toolbox' where, in the end, scientific credibility is less important than practical efficacy (Lassnig 2009). Nevertheless, our aspirations go farther than just expanding professionals' repertoires (especially while they still might face subordination to the ideal of technical rationality) to vitally incorporate the notion of 'scientific temper'. Instead of subordinating science to technical rationality[1], Dewey (1938) constructs a different understanding of a scientific approach that rests on reflection in practice. 'Scientific temper' denotes a practitioner's stance towards a situation which rests upon careful and 'objective' observations and involves an interim suspension of judgement (Campbell 1995: 101) as well as careful collection of data across options.

We extend the concept of 'scientific temper' from epistemological into ontological territory, suggesting a new kind of science resting on post-constructivist and post-structuralist foundations. Each scientific account, through its theoretical and methodological 'apparatus' (cf. Barad 2003) enacts a specific reality, especially when in line with criteria of credibility and legitimacy valid for a particular scientific community. Thus science does not speak an objective truth about a singular reality but instead enacts multiple more

[1] Raelin (2007: 12) also warns from the opposite, the academic 'haste in wanting to know'.

or less powerful realities that frame how a specific problem may be constructed and addressed. It influences the distribution of power and resources in society and is inherently political. The practitioner should thus nurture awareness of the political implications of the choice of a way of looking at the situation.

Also, complexity implies impossibility of a single legitimate simplification of a situation, thus the practitioner should hold on to parallel competing hypotheses and resist the compulsion to reduce the ontological multiplicity of the situation into a single reality for as long as tenable (cf. Martela 2015, Law / Singleton 2014). At the same time, we have to take into account that this is a potentially difficult task since practices of complexity reduction are intrinsic to problem-solving and decision-making, not only in public administration. On the one hand, "our capacity of processing information is limited and our preferences are unstable and inconsistent", not speaking of system constraints and path dependencies (Ortmann 2003: 138, own translation). On the other hand, reducing complexity is a necessary evil to some degree – and has been subject of numerous decision making models – because the infinite search for 'true facts' could otherwise find no end and eventually make the actor incapable of acting (cf. Reichertz 1997).

Training civil servants for practical science

Promoting and teaching an extended 'scientific temper' goes hand in hand with employing an explorative, research-oriented approach to learning. As opposed to traditional didactical learning with the classical distribution of roles to teachers ('those who know') and students ('those who do not know'), 'learning by research' (Künzel 2016, cf. Weber 2006) aims to turn 'those who learn' into curious, critically thinking and independent individuals. This approach (ibid.) develops competencies that are typical for a research process while taking into account the specific subject matter of the respective course – also implying that the approach sketched in this paper is applicable in contexts beyond research method or design courses.[2] In addition, problem-solving endeavours can be more readily conceptualised as 'research' projects by embedding them in participatory and action research or evaluation frameworks.

At the same time, placing problem solving front and centre calls for an approach rooted in the immediate experience of the problem, while also providing spaces for abstraction and reflection. To enable experience that is challenging and rewarding in the immediate doing, and thus being able to unfold long-lasting effects (Cohen 2007: 777), means taking Dewey's[3] deliberations seriously. Dewey's emphasis on a "theory of experience" has been further elaborated in the Experiential Learning Theory (ELT; Kolb 1984; cf. Kolb / Kolb 2005), postulating a "learning cycle driven by the resolution of the dual dialectics of action/reflection and experience/abstraction" (Kolb / Kolb 2009: 43), sometimes also simplified to 'learning by doing'. Mid-career professionals find themselves in the third (and final) stage of the ELT development model, described as 'integration', where "non-dominant modes of learning are expressed in work and personal life" and the focus lies on the self as "process-transacting with the world" (ibid.: 48-49; cf. Kolb 1984). Our didactic conception below facilitates the integration of various learning styles, thus enabling 'movement' towards a more 'whole' person.

[2] Such competencies include defining, explaining, investigating and categorising, comparing own categories to existing models, choosing a model relevant to the student's interests and developing from the model questions for further research, choosing an appropriate approach for working on the problem, analysing, providing suggestions for solution and criticising, pursuing assumptions and examining claims, and making a structured argument for a hypothesis or an assumption (cf. Künzel 2016). Since we argue that these competences are crucial for developing an extended 'scientific temper' among civil servants, on a higher level of abstraction these have been included in our competence profile for public servants and are implied in the didactic steps presented below.

[3] "In the process of living both absorption in a present situation and a response that takes account of its effect upon (…) later experiences are equally necessary for maintenance of life" (Dewey 1938: 30).

We have developed a process model of research-oriented learning, consisting of a sequence of activities (see also Fig. 1). The sequence can be seen as a wave mapped onto two dimensions: the movement from an immediately experienced practical problem towards a known and materially controlled situation (x-axis), as well as the polarity of abstract vs. concrete (y-axis). The latter collapses the two dialectics in Kolb (1984) – i.e. dialectics of action/reflection and of experience/abstraction – onto one scale while retaining the cycle of modes of learning (diverging, assimilating, converging, accommodating, with an as of yet unnamed extension into the evaluative territory).

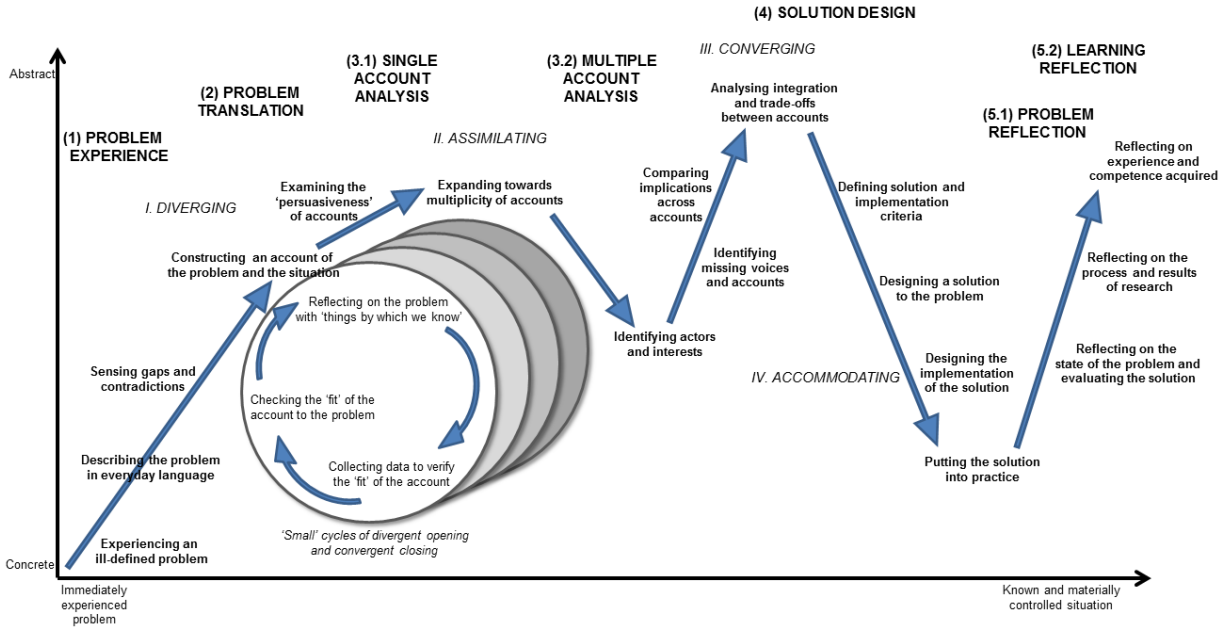

Fig. 1: Process model of research-oriented learning inspired by Kolb (1984) and Künzel (2016).

1. *Problem experience:* A practical, concrete organisational or societal problem that confronts the practitioner is experienced. Various techniques simulating the practitioner's immediate involvement with the problem and thus facilitating experience can be used, including use of mock documentation and work organisation and tools (i.e. accommodating social and material interaction). Experience takes place through the lens of a task, i.e. the situation includes (enacts) the learner as an actor in a specific position, thus helping to take on a role and activate affective, senso-motoric, cognitive and normative routines. It is vital to get close to a 'total and living immersion' (the 'denotative method', cf. Hildebrand 2005) as well as acknowledge the relevance of tacit knowledge for experiencing the situation (Raelin 2007). The format of instruction (class-based, online (synchronous or diachronous), or blended) will therefore adjust to the nature of the simulated task (and vice versa). While experiencing, the learners also describe the problem, at this stage relying on a combination of everyday registers (Gramscian *senso commune*) and innate expert/technical vocabularies. Complexity should not be avoided; thus, also contradictory or incomplete accounts are gathered. Problem identification can take place beforehand by the instructor as well as also carried out by the learners in the initiatory stage; nevertheless, an ill-defined problem should be chosen or framed. Therefore, it is also desirable to identify ('sense') the mentioned inconsistencies or gaps in the accounts of the problem.

2. *Problem translation:* Increasing the level of abstraction and divergence, the problem with its descriptions is linked to several scientific debates and bodies of knowledge. This might require retracing the (sometimes distant) theoretical underpinnings of expert concepts that filtered into everyday use, but focus here is also on withholding practical judgement and acquiring additional scientifically informed perspectives. Building on explicit concepts and relationships from several theories, the learners attempt to reframe and translate the practical problem into different vocabularies with the aim to identify new accounts of the problem. The resulting accounts are evaluated on the basis of scholarly criteria. Accounts which seem more robust ('persuasive') or promising are selected and knowledge gaps are identified. This stage can be prolonged – and the immersion into the task withheld or interrupted – through deeper information gathering to address said gaps. In such a case, similarly to problem-based learning (Weber 2006), the learners construct different accounts through literature review and involvement of organisational and societal actors. This can take place over a longer time span (up to several weeks), as an individual or group task.

3. *Account analysis:* In this stage the individual accounts are at first analysed one by one, each as an enactment of a singular reality ('single account analysis'). 'Real-life' implications of the choice of an account, i.e. a way of seeing the problems and its enabling scientific 'instruments' are discussed in terms of acknowledgement and empowerment of actors and impact on the choice of solutions. Winners and losers are analysed (including the expert communities and their link to the state and political economy), as well as the link of individual accounts to the common-sensical practice-based problem descriptions. In addition, the ways how this particular way of seeing prefigures ways of acting are reflected. This step towards the concrete pole of the axis requires interaction between learners and support by the instructor, it is therefore particularly appropriate as an in-class group task. In a subsequent, more abstract sub-step ('multiple account analysis') which corresponds to the converging stage in ELT (Kolb 1984), the individual accounts from previous step are now compared (i.e. comparison across realities) and the possibilities for their integration are explored. Learners try to see whether multiple objectives can be pursued in parallel and to what extent it is possible to frame the problem in a way that maintains the possibility of parallel plural accounts (intentional ambiguity). They analyse the trade-offs inherent in the choice of only particular accounts at the expense of others. They also identify missing accounts and reflect on why some scientific accounts and forms of knowledge become hegemonic and others silenced (epistemic politics).

4. *Solution design:* In this stage learners use chosen accounts to define solution and implementation criteria. Then they design the solution (perhaps integrating various accounts) and design practical steps for its implementation.

5. *Reflection:* At the end of the process (after putting the solution into practice is simulated) lies reflection addressing two domains. First, learners reflect on the 'success' in addressing the problem (i.e. changes in the development of the problem, impact of the adopted solution). This reflection covers not only the practical, efficacy dimension, but also the epistemic dimension, meaning the impacts and strategic aspects of the choice of account(s) for describing and tackling a practical problem (and a choice of particular form(s) of knowledge as privileged or authoritative, with their methodological and theoretical apparatus usable also for their own research). They also have the possibility to analyse, using empirical data and own experience from this process, on how particular knowledge becomes (or does not become) authoritative. This process completes the so-called 'third-order learning', or learning about the 'context of contexts' (Bateson 1972 in Raelin 2007, p. 501). Second, learners reflect on the learning process from their personal perspective, the experience acquired and their participation in

explicit knowledge (co-)creation, as well as learning in the tacit domain. In a reflective practice "our experience with others informs us, pulls us, and even transforms us" (ibid., cf. Wenger 1998), therefore it is also important to position own personal learning within the context of the community of practice (its interactions, vocabularies, values, cognitive and interpretive resources etc.) – it is not only the individuals that learn.

The approach to problem-solving described in this contribution which involves a high level of openness, investigation and reflexivity can also be related to the ethical competence that is required of civil servants. The framework for ethical decision-making developed by the Markkula Center for Applied Ethics at Santa Clara University (2015)[4], which can also be applied in the context of public management, includes five phases similar to those presented in this section: (a) recognising an ethical issue, (b) getting the facts, (c) evaluating alternative actions, (d) making a decision and testing it, (e) acting and reflecting on the outcome. In our view, the ethical dimension of problem solving also includes process aspects related to scientific knowing and knowledge production. Already Friedrich (1940: 6) formulated the criterion to call a policy "irresponsible if it can be shown that it was adopted without proper regard to the existing sum of human knowledge concerning the technical issues involved", thus integrating scientific criteria into administrative ethics.

Our experience with this approach shows that socialisation with explorative, research and problem-oriented learning that contrasts the traditional passive, uncritical student role has an effect – at least within the classroom. Although it is too early to talk of systematic evaluation of this approach, we can see significant advances in the students' understanding and application of science, more out-of-the-box thinking, as well as readiness to apply scientific frameworks as well as switch them in addressing practical tasks than in previous classes that did not aim to encourage a scientific approach to problem-solving.

Conclusion

In this contribution, we adapted Dewey's notion of extended 'scientific temper' to counter problematic technical rationality. We stress the usefulness of post-structuralist and critical science for civil servants and public managers, where the use of scientific knowledge as 'instruments' to solve practical problems can serve as particular kind of research in its own right and open spaces for creation of counterhegemonic alternatives. Most importantly, this paper outlines a practically useful and transformative kind of science and its didactics in the context of professional degree programs.

It is crucial to build on human agency and the power of individuals to induce change through social action. Civil servants sometimes try to "escape personal responsibility because they [are] part of a larger organization" (Martinez 2009: 85). It is more comfortable when someone else decides what is right and wrong. According to Sheeran (1993: 151), however, "a willingness to explore and assume personal responsibility for doing the right thing" represents the key to ethical responsibility in public administration. Taking the extended 'scientific temper' seriously might thus have a broader impact at the organisational level, including recruitment and management, as well as at the wider governmental level. Our debate on performance regimes also seems to strengthen this notion that a transformation of practice following the notion of extended 'scientific temper' does not only require a change in mind-set and other components of sociomaterial practice, but also a change towards more generally fitting organisational conditions (a point briefly addressed above). Therefore, underlying the notion of changes to the process of knowing is a theme of a normative image of future PA organisations with respect to science and

[4] The Center has also developed an app for making ethical decisions, "a practical tool for thinking through tough decisions", https://itunes.apple.com/us/app/ethical-decision-making/id799710217?mt=8 (accessed 27 Jan 2017).

knowledge in general. Such an image might go beyond the guiding image PA organisations built for themselves out of theories of evidence-based policy making or learning organisation in several respects: (1) living and coping with plurality of (scientific) narratives – 'ontological multiplicity'; (2) making epistemic selection processes explicit and reflected, i.e. focus on process and engaging with, rather than denying, complexities and uncertainties; (3) understanding the role of science not as a provider of definite – and hegemonic – expert knowledge ('content'), but in its process role too, as a socially engaged and emancipatory (i.e. also political) process of managing and coping with complex and contested issues.

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