Simplifying instructional methodology through meta-practices

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Abstract:

Choosing appropriate instructional methodologies when designing a course is challenging. The variety of options available magnify this difficulty. For good reasons, educators may be reluctant to implement new instructional methodologies, even when they are interested in doing so. We propose a potential solution based on the findings of a recent research study that identified instructional meta-practices (i.e., fundamental course activities shared by many different instructional methods) and their effects on a variety of student outcomes. We summarize the research findings and build on them to suggest how meta-practices may simplify the challenge of choosing an instructional methodology. Our suggestions include specific examples for a variety of teaching situations and a summary of one educator's experience.

Keywords: collaborative learning | peer assessment | problem-based learning | self-awareness | student engagement | teaching philosophies | team-based approaches

Article:

Background

Whether one is preparing a new course or revising an existing course, the challenge of course design can seem overwhelming. Choosing an appropriate methodology to deliver curriculum is complex. In addition to ensuring that students acquire requisite content knowledge, many educators seek to help students develop valuable skills and attitudes (Devlin, 2006; Schmidt-Wilk & Lovelace, 2017). Evidence indicates that one of the best ways to do so is using nontraditional methods to increase student involvement (Bain, 2011; Brookfield, 2012; King, 1993), particularly among adult learners (Knowles, Holton, & Swanson, 2011).

However, acting on the desire to increase student involvement is not a simple matter. There are many options to choose fromW, including well-defined methodologies such as problem-based learning (Boud & Feletti, 1998), team-based learning (Michaelsen, Sweet, & Parmelee, 2011), and classroom-as-organization (Cohen, 1976). The number of available possibilities is vast. Moreover, an educator may find some aspects of a given methodology attractive, while other aspects seem impractical (e.g., due to class size, lack of movable furniture). When this impracticality combines with the time commitment and risks associated with implementing an unfamiliar teaching method, it is not surprising that many educators simply maintain the status

quo (Herckis, Scheines, & Smith, 2017; Matthews, 2017). Educators may feel that there is too much to consider, too much risk relative to uncertain reward, and too much time required to make useful change. Currently, no straightforward system is available to organize and compare the many options available, but the research study described below suggests one possibility for doing so.

Research Summary and Implications

Bright and colleagues (2016) observe that most methodologies for increasing student participation share a constructivist orientation. Constructivism is an educational philosophy based on the assumption that learners must actively construct new knowledge, that there is no transmission of knowledge from expert to learner without the learner's active participation (Driver, Asoko, Leach, Scott, & Mortimer, 1994; Perkins, 1999). Consequently, a constructivist educator teaches by helping learners discover and practice (Mascolo, 2009). The constructivist's goal is for learners to not only acquire content knowledge but also be able to apply that knowledge and be motivated for further learning (Candy, 1991). Bright and colleagues (2016) argue that the construWctivist orientation inherent in most methods for increasing student involvement gives those methods a shared perspective. This unifying perspective leads to instructional meta-practices: "a pedagogical element that is used across various teaching strategies or pedagogical systems" (Bright et al., 2016, p. 76). In other words, the diverse teaching methodologies share common themes, and these commonalities offer a way to characterize and contrast different teaching methodologies.

To test this possibility and its implications, Bright and colleagues (2016) studied 650 students from 22 classes and eight instructors at five different universities. In addition to the effect of the instructors' knowledge, they identified three meta-practices that influenced student outcomes: students designing curriculum (i.e., influencing the content and activities in the course), students leading their peers (i.e., formally or informally directing course-related activity), and students assessing their peers (i.e., observing and providing feedback to other students). These practices are familiar to most readers, and that familiarity is part of what makes them meta-practices. Bright and colleagues' (2016) contribution lies not in naming the practices but in highlighting that they are shared features of many different instructional methodologies, and so offer a simpler way of thinking about those methods.

Without meta-practices, an educator who wants to increase student involvement has two choices. The first option is adding one or more specific practices into a course (e.g., adopting open-ended problems from problem-based learning or readiness assessments from team-based learning). While this option provides flexibility, it can create problems, as the specific practices may need support not provided by other parts of the course design. Worse, multiple ad hoc practices may interact in unexpected ways and fail to produce the desired outcome (Ebert-May et al., 2011). The second option is to adopt a fully developed instructional method (e.g., all of problem-based learning or team-based learning). This option also has drawbacks: less flexibility, a higher initial time cost, and a potential lack of fit with an educator's teaching preferences or context.

We assert that Bright and colleagues' (2016) results suggest a third option for course design. They found that the three meta-practices influenced students' content knowledge, engagement in

the class, level of self-efficacy, development of self-awareness, and sense of community with other students (see Table 1). In our view, the most important aspect of these findings is that they reflect results from many different instructors using quite different teaching methodologies at a variety of schools. Table 1 highlights common themes uniting these diverse methods, which have three important implications for course design.

Table 1. Comparative Effects of Instructor Expertise and Meta-Practices on Student Outcomes[a].

	Content knowledge	Class engagement	Self-efficacy	Self-awareness	Sense of community
Instructor expertise	+	+	0	0	0
Students designing classroom activities	+	+	0	0	0
Students leading other students	0	+	+	+	+
Students assessing peers	0	+	+	+	+

Note. "+" indicates that the meta-practice in that row increased the outcome in the column, while "0" indicates that the meta-practice had no effect on the outcome.
[a] Based on Bright et al. (2016).

The first implication is that the assumed cost of "alternative" teaching methods does not exist. A common argument for maintaining the traditional, lecture-based status quo is that there is "too much content and too little time." The basic assumption is that any time spent on something other than lectures reduces students' content knowledge. However, the results of Bright and colleagues' (2016) study suggest that this assumption is false: None of the meta-practices had a negative association with students' performance on a standardized test of their knowledge, and one meta-practice increased test performance. At a minimum, this study provides empirical evidence for educators who need to justify their instructional methodologies. Alternative teaching methods need not compromise students' content knowledge.

The second implication is that a customized approach to course design is feasible. The findings offer a middle ground between the wholesale adoption of an entire teaching method and the problems of using individual practices taken ad hoc from a complete teaching method. For example, based on Table 1, to increase content knowledge or engagement levels, one could consider how to give students some control in the design of the curriculum. In contrast, this option is not a good choice when seeking to increase students' self-efficacy or self-awareness. The exciting aspect of these results is that the meta-practices are general in nature. Because there are many ways to implement each meta-practice, educators can develop plans to suit their unique situations, rather than feeling constrained to force an existing tool or method into their context.

The final implication is that separating means from ends in course design would be beneficial. It is our impression that many educators' initial thinking about a new or revised course design is in terms of specific instructional techniques: "What's a good way to cover this content?" Based on Bright and colleagues' (2016) findings, educators might instead think of the outcomes desired (e.g., to increase student engagement) and then use a relevant meta-practice to guide selection of a specific technique. This difference in perspective should enable educators to choose or develop techniques that produce their desired outcomes, rather than feeling they have to struggle with adopting a preexisting methodology. Below, to help educators think about what would best suit their specific needs, we outline multiple brief examples of how one might use the meta-practices

in a variety of situations. In addition, the appendix describes a detailed example of how one of the authors used the meta-practices in redesigning a course.

Examples of Implementing Meta-Practices

Having learners *design classroom activities* requires students to construct and deliver learning activities as part of the course. Doing so should benefit a variety of student outcomes (Bright et al., 2016) but also raises questions about the educator's role. Does the educator work in partnership with the students as a "guide on the side" (King, 1993; Palmer, 2007), act as a manager supervising students' efforts (Putzel, 2007), or simply provide feedback at the end? The most appropriate choice depends on the level of the students (e.g., undergraduate vs. graduate), the nature of the course content, and the educator's goals. For example, in a senior-level leadership class, suppose the educator wants to use this meta-practice to focus on learning content, and particularly the ability to recognize and synthesize useful information. Students could be required to find additional material beyond the textbook and present it to their classmates in an activity-based format of their choosing. In this case, the educator's role is to review proposed material and to help with the construction of the activity, rather than help with synthesizing or translating the material for application. In contrast, if the goal for the same course and activity were to improve presentation skills, then the educator would be less involved in the selection of content and more focused on providing feedback about the students' self-directed construction of the activity.

Allowing *students to lead their peers* offers many potential benefits such as an increased sense of self-efficacy, greater self-awareness, and a stronger sense of community (Bright et al., 2016). However, educators must be aware that all novice leaders need help, regardless of student level. When using this meta-practice, the role of the educator likely resembles that of a coach or a senior manager, who must lead through others (Michaelsen & Sweet, 2012; Palmer, 2007; Putzel, 2007). For example, in an organizational behavior course, the educator can place students in work teams, each of which is responsible for organizing a hypothetical university event (e.g., art show, dance, fundraiser). Members of the team will have responsibility for different aspects of the event, such as determining a university-approved vendor, promotion, or finances. Team interactions will not only generate concrete organizational behavior for discussion in class but also allow students to lead by holding them individually accountable for their area in group meetings and progress reports to the educator. The educator's role is to act as an expert guide, role modeling leadership behavior and assigning each student a "leadership" grade. More generally, students can lead their peers in any interdependent group-based work where the educator assigns each individual some distinct responsibilities, so that they feel the need to advocate for their position to the rest of the group.

The importance of *students assessing peers* has grown as working in teams becomes more important to business schools (AACSB International, 2017). Educators play a crucial role in this meta-practice, because students are often averse to giving each other genuine feedback (Michaelsen & Sweet, 2012). Simply introducing peer assessment without instruction is unlikely to help students learn. Rather, the educator must explain the purpose of the feedback and act as a role model in giving it. For example, in a supply chain management course a detailed Request for Proposal may be the key deliverable of a month-long team project. Before starting the project,

the educator introduces the benefits of teamwork in a production setting, creates diverse teams, and requires a "rules of feedback" contract for each team. Teams submit contracts signed by all members before the project begins. At the end of the project, peers assess each other as teammates using this contract, receive a grade based on the assessment, and submit a graded post-project self-assessment addressing their views on the teamwork process. The role of the educator is to model the provision of feedback throughout the course and to act as a team process and feedback consultant.

Conclusion

Evidence shows that adult learners are more likely to learn and grow in courses that use nontraditional, participatory methodologies. Unfortunately, educators who wish to adopt such methodologies face challenges doing so, not least of which is choosing a method that suits their specific situation. In response, we have argued that instructional meta-practices offer a relatively straightforward way for educators to develop participatory, constructivist methods that fit their unique context. Rather than try to make an "off the shelf" solution work, we invite educators to consider what they are trying to accomplish (e.g., content learning, skill development), identify which meta-practice best serves that goal, and then develop a methodology that suits the rest of their course design. In this way, it should be simpler for educators to design methods that achieve their chosen goals.

Appendix

Eric teaches an undergraduate leadership course for 34 students in a school of business. The course's learning outcomes specify that students will learn to (1) lead others effectively, (2) organize activities to implement decisions, and (3) deliver effective oral presentations and written communications. Eric redesigned the course in a fashion consistent with the meta-practices to be more engaging for learners while achieving the course outcomes.

He incorporated *students designing classroom activities* and *students leading others* by having the class create training activities for the course's leadership content and use those activities in a workshop format similar to those used by professional trainers (Practice for Learning Outcome 2). In the new design, the students work in teams of two or three to develop the workshops, delivering them several times so that all team members have a chance to lead the workshop (Practicing Learning Outcomes 1 and 3). Eric chose to use teams to increase workshop quality but kept the teams small to encourage all members to contribute (i.e., prevent social loafing).

To underscore the importance of every team member doing their part, and to incorporate the meta-practice of *students assessing peers*, Eric helped the students develop peer assessment rubrics for team members to complete (see below for samples). As well, he used the 360-degree feedback tool in the course's textbook to provide more opportunities for students to assess peers. Doing so provides Eric with data about Learning Outcomes 1 and 3 and gives students more practice in providing peer feedback (Practicing Learning Outcome 3).

In support of all three learning outcomes, Eric has workshop participants give feedback to the designers. Instead of designing the feedback form personally, he does so with the class as a

whole. This collective approach generates useful discussion about leaders setting expectations and includes all three of the meta-practices.

The findings of Bright and colleagues (2016) suggest that these changes should not only provide plenty of practice in all of the learning outcomes but also benefit students' content knowledge, and increase their engagement, self-efficacy, self-awareness, and sense of community—and that was the result. Eric's course design became a blueprint for the department. The results were so positive that all instructors in his department now use the same approach in their own course designs. One of the effects of this approach has been to motivate seniors in the business school to write a Code of Conduct outlining their behavioral expectations after university. Volunteers from each graduating class write a new code, and all graduating majors sign it. The code represents the student engagement, self-awareness, and sense of community that has developed around the major and the leadership class specifically.

Leadership Class Peer Evaluation Sheet 1

Team _____

Did the team member meet required attendance for the workshop?

Name of team member	Comments (pass/fail)

How would you rate the team member's participation, with 1 being the worst and 5 being the best?

Name of team member	Ranking	Explanation
	1 2 3 4 5	
	1 2 3 4 5	

How would you rate the quality of the team member's presentation?

Name of team member	Ranking	Explanation
	1 2 3 4 5	
	1 2 3 4 5	

How would you rate the quality of the team member's contributions to the group?

Name of team member	Ranking	Explanation
	1 2 3 4 5	
	1 2 3 4 5	

What attributes from the first workshop would you take on to the next workshop?

What attributes would you improve on for the next workshop?

Leadership Class Peer Evaluation Sheet 2

Name:

Please appropriately rank order the members of your group below on a scale from 1 to 5, where 1 is the lowest and 5 is the highest. Include yourself in the ranking

Member's name	Effectively communicated with their group outside of class	Effectively participated in group discussion	Consistently prepared for class and was ready to contribute	Effectively demonstrates leadership qualities	Consistently reliable and accountable for all actions

Be prepared to discuss your ranks in class, as we will be giving each other oral feedback to support the rankings.

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