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Reflective journal insights from a first-year undergraduate class exercise

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Abstract

First-year student reflective journals showed a range of learning responses to a first week undergraduate class exercise. The exercise, about usually invisible bathroom rules, asked the question: "Which way should toilet paper hang?" with the underlying objective of demonstrating how "big-picture" sociological themes such as class, culture, and gender function at private and personal micro-levels of behaviour. This often proves surprising to students. However, what is the contribution to tertiary learning beyond a fun class session introducing them to university? The initial goal in reporting student journal reflections about this teaching exercise was to enable teacher reflection on student learning. Closer inspection of students' journaling efforts reveals the complexity of what can be counted as learning even within the differentiated responses made.

Keywords

Journal writing; reflection; sociology; student learning; teaching; undergraduate

Introduction

Weekly class exercises in a first-year undergraduate sociology class were written up as a final journal assignment for the subject, handed in at the end of the semester. In the opening week-one exercise write-up, students were thus at their least knowledgeable in applying the new subject's concepts, simply responding to the "space" created by the exercise to start learning about the relevance of new ideas and perspectives. This first exercise is described here, and then analysed via students' journal entries about the exercise, to think about the process of student learning. Taken as a whole the journals aimed to elicit student reflection about what they were learning beyond specific facts. The holistic and formative nature of learning and acquiring insight underpins such use of journals for assessment.

Engaging first-year undergraduates

In the tradition of developing imaginative teaching exercises (Brezina, 1996; Brouillette & Turner, 1992) to foster student insight and learning, Burns' (2003) introductory sociology course exercise used material from everyday bathroom practices to tap into new first-year students' lived experiences—things about which all students have some knowledge—to challenge their unproblematised views of

such mildly taboo practices. Arguing about something as unimportant as whether toilet paper should be hung outward-facing or inward-facing often proved revelatory to students.

Following previous use of this exercise in the first week of semester, the tutorial/small discussion class started with the following question written clearly on the whiteboard, "Which way should toilet paper hang?" with vertical and horizontal lines drawn underneath to place student verbal answers. After a few sniggers, if requested, the teacher drew on the whiteboard the following: a round roll of paper, the roll position relative to the wall on which it is hung; and perhaps "In" and "Out" positions shown by dotted lines representing paper hanging from a toilet roll. Each student was then asked to temporarily commit to an "In" or "Out" preference. Subsequent discussion was guided by asking students to explain why they adopted the position they chose, and comparing responses.

As well as achieving a new class ice-breaking function, the serious learning objective revolved around how key social structures and patterns of society are embedded in, and naturalised, in everyday social interaction. However, far from being "just natural" there are significant normative "oughts" and "shoulds" about who should do what, and prescriptions about behaving in certain ways attached to such interaction based on gender, age, family rules and other norms and roles. Without, in this first class session, unpacking this bigger picture, the identification of such rules functioning invisibly in students' worlds that most had hitherto thought of as private and natural—just the way things are— engages many students' attention. Yet it is always relevant to ask what students learned, and how do we know?

Using reflective journals to look back at this exercise

Reflective journal keeping by students to assist their deeper learning has been widely used in many fields, and has long been considered a "good thing" pedagogically (Bisman, 2011; Wilson, Hine, Dobbins, Bransgrove, & Elterman, 1995). However, this broad assumption can be problematised, and Wong, Kember, Chung and Yan (1995) did so using postgraduate nursing reflective journals to see if they could discriminate between better and more basic students learning. Wong et al.'s team of evaluators had poor results in trying to make fine-grained distinctions, but found Boud, Keogh and Walker's (1985) three-fold categorisation of student journals into non-reflectors/reflectors/and critical reflectors consistently useful.

O'Connell and Dyment (2011) reviewed 75 articles from several disciplines analysing reflective journals, identifying four benefits for students and three advantages for instructors, pointing out several issues showing widespread use is not unproblematic, although they conclude on a sanguine note. Others such as Bisman (2011) adopt an intermediate position in researching reflective journals, midway between the post-hoc use as a tool to research teaching and learning—as used here—and the descriptions above that formally inquire into the validity and reliability of reflective journals themselves.

These cautions are entered here because in the present evaluation of the toilet paper exercise, since the intended purpose is to use the reflective journal reports as the measuring tool for the merits of the class exercise, it still needs to be recognised that the journal process itself also has to be introspected beyond this: what are the limits in reflective journal pedagogy—raised by scholars such as those mentioned in the previous paragraph—and hence the limits of reflective journal evaluation methodology? Minott (2008) in a small study like the present one (n=20) applied Valli's (1997) five types derived from a literature survey of learning-reflection to pre-service teaching students: technical reflection/reflection-in-action/reflection-on-action/personalistic reflection/and critical reflection. Valli's students had teaching practice experience to combine with classroom learning (reflection-on-action), but in the present discussion only one hour of classroom interaction is under scrutiny.

It is significant to note that Hubbs and Brand's (2010, p. 58) literature survey found only a fifth of counsellor educators, "employed explicit criteria for analysing and critiquing journal entries". Here, although numbers are small, the proportion responding at over ninety per cent is high from the available group, allowing some potential insights through thematic analysis of the journal entries. The limitation of this is that it does not match repeated investigation on a larger scale; but it provides teachers some feedback in this iteration of the exercise.

Contemporary scholarship of teaching and learning aims to move examples of teaching excellence beyond, "I tried this and it works great!" to illuminate some of the elements that make it productive for students' learning (McKinney, 2007; Trigwell & Shale, 2004). In many cases, developing awareness of the value of capturing student responses to a given exercise also promotes an evaluative dimension. Shulman (1998, p. 5) suggested investigating the usefulness of teaching and learning, "should be public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of one's scholarly community".

Because the creative processes making learning insightful and interesting are often "chalk-facing" rather than assessment orientated, there is a tension for busy tertiary educators engaging with what can appear to even excellent teachers as another layer of compliance rather than a powerful justification of their teaching contributions. The literature promoting the benefits of evaluating effectiveness of teaching exercises and other learning elements does not always name this tension and the consequent reluctance of evaluation take-up by front-line academics (Yorke, 2009). Nor does this literature always name the advantages of being in more personal control of reflecting on teaching effectiveness about what students actually understood. The wide usage of Likert student satisfaction surveys near the end of semester required by many institutions has several shortcomings in measuring student learning rather than satisfaction. Confounding variables such as the charisma of popular teachers versus other equally knowledgeable academics; gendered perceptions of teacher expertise, age and teacherly authority; the sequence in which individual subject modules are taught, and the negative influence of required-subject, all affect these surveys' indication of student learning.

Furthermore, in reflecting on one's practice, in many instances it is only later, perhaps much later, that teachers themselves realise the value of what they achieved. With varying amounts of deliberateness or preparation, a classroom exercise or routine of problems-and-questions is found to work well and appears to lift student understanding and interest in a given subject. Beyond why "this worked well …" is a further query, how to externalise the evidence that the exercise worked well, and is effective for student learning. Not just to others, but in terms of personal self-doubt and desire to improve: how does a teacher know what occurred inside student heads by way of learning—new knowledge, changed opinions, new connections, and so on? This article explores one layer of reflection about the nature and art of teaching that needs to be considered.

Method

From the literature considered above it appears better to avoid too fine-grained inspection seeking absolute certainty or clarity about teaching effectiveness. Instead, a more general categorisation emerging from student comments offers a practical way of assessing the toilet paper exercise using reflective journal data. Thus, Boud et al.'s (1985) long-standing categorising of reflective journal student writers into (1) non-reflectors, (2) reflectors, and (3) critical reflectors, is used to interpret the journal entries from each participant.

Students' weekly reflective journals were drawn from four tutorial classes run in parallel each week using the same teaching exercises: seventy-seven students with the same instructor, within a much larger first-year course. This teaching exercise was done in week one, but the reflective journal was submitted in the last week of semester, twelve weeks later. Ambiguity in subject guidelines meant some students completed week one entries, while others did not.

About half of the journal assignments were returned to students before the evaluation check described here could be made. From the remaining half, fourteen of thirty-five scripts examined made an entry for week one; three of these were discounted as largely "reconstructed" later in the semester, and therefore excluded. From the eleven scripts to make a valid week-one entry (n=11), nine made reference to the toilet paper exercise. While the number is small, the high return rate for eligible journals allows themes to be identified for refining reflective practice, or planning larger scale inquiry.

The method used to analyse the exercise can be summarised as follows: first, it takes the presence of first-year students in their first university semester, in their first introductory subject, as a default measure of little if any prior sociological understanding (pre-testing). Second, the exercise uses the one-hour class-based interaction as the intervention that may or may not create new learning and understanding. Third, as a post-measure it uses a graded assessment called a "weekly reflective

journal" as evidence of what students have or have not absorbed of the meaning of the class exercise, "Which way should the toilet paper hang?" A separate control group was not considered. Thus, the teaching and learning objective is to utilise first-year undergraduate students' written commentary from their reflective journals to capture some evaluation of increased student learning and understanding from the teaching exercise. Approaching the issue of evaluation like this uses the intrinsic process of measuring student learning in subject assessments, focusing on one specific class exercise.

Findings

Hubbs and Brand (2010, p. 59) define a reflective journal as "a written narrative that facilitates on-going disclosure of the writer's cognitive and emotional insights. … a vehicle for chronicling the writer's internal processes about experiences, values and beliefs". However, clearly the semester's first week tutorial can only be one snapshot in time, rather than a more measured development of a student's new learning.

Reflectors and non-reflectors

The first student's journal script succinctly caught the core insight of universal social rules and norms.

> My first taste of sociology came from my tutorial and I noted the tutor brought up an interesting statement that "life is full of little invisible rules", this is something I very much agree with. (F, 18)

But a health science major struggled to get the point:

> This week we discussed the idea of which way toilet paper "should" hang and the various reasons for the answer. The majority of the tutorial group answered that the toilet paper should hang away from the wall and strongly cited their reasons as being: it is neater and easily accessible. The minority said they chose against the wall because, as the toilet paper was further away from the toilet it was cleaner. I have not been able to fully understand what this has to do with sociology.

She continued, trying a comparison between her own privileged country versus "other societies," but with no significant conclusion:

> Maybe it is telling us that in a privileged society such as our own we have nothing better to do than be pedantic and complain about such minor things such as the way the toilet paper hangs. In other societies that don't have the luxury of toilet paper, do they worry about which side of the leaf will cause the least irritation to their bum?

On the other hand, however, she found it engaging, causing her to think in some way. As a very youthful and shy person, beginning an applied course in another faculty, sociology for her was an optional subject. The invitation in introductory sociology to look more into society around her than she otherwise would is an opportunity she may well have never sought nor had the chance to experience.

> I enjoyed this discussion in the tutorial a lot and also listening to the reasons why people strongly oppose hanging toilet paper against the wall. I also found it interesting to hear that people will actually go out of their way to turn the toilet paper the "right way". I myself have always liked the notion of the toilet paper hanging closest to the toilet but have never been motivated to go out of my way and change it. (F, 18)

Reflective journal entries

A young man in one group managed to connect the concepts of socialisation, normal behaviour, and "taking for granted". Whether or not he may have had any familiarity with those concepts before, he was starting to join them together academically in the manner Mills' (1959) advocacy of the value of a "sociological imagination":

My tutor also got us to complete an interesting exercise involving surveying the class on how they would hang a toilet roll on the wall. I was surprised at how a simple question could polarise the class and incite a heated debate. I learned from this exercise that even the most seemingly simple tasks could be shaped by our socialisation. It was interesting to see that different people had different perceptions of "normal" behaviour in nearly every facet of life. This made my mind spin, as it made me think about what else I may be taking for granted as "normal" that other people have completely different standards for. I think this was the first time I viewed myself from a sociological perspective. (M, 19)

This is at least personalised reflection if not yet definitely critical reflection in Valli's (1997) terms.

Another student, a working-class young woman fresh from school, showed a study focus that continued and developed strongly as the semester progressed. From this class session she was subsequently able to deploy terms like "socialisation" and a sense that academic study might be manageable.

The tutorial was based on introducing us to sociology. We participated in an activity. The question was: what way does toilet paper hang in your house; inside or outside? Majority of people chose "Out". We then discussed people's reasons for this. Tutor brought up a statement that people from other nationalities or cultures could think differently. Maybe they don't use toilet paper. Such things as the way your toilet paper hangs is influenced by socialisation. I left the tutorial thinking that sociology would be interesting and having a better understanding of the subject. (F, 18)

Emergent critical reflection

Another young woman without a strong academic background found herself now able to combine, on the journal page, such sociological building blocks as socialisation, values, and norms.

Coming into the semester and the first lecture I was unaware of what really sociology is … From the tutorial, I was able to make a definition of what socialisation is. I came up with this: socialisation is the processes by which we take on and start to get used to the values and the norms, or invisible rules. (F, 18)

By far the most extensive comment came from a self-described lower-middle class family member with ambitions to be a lawyer. She was yet another student who worked very diligently throughout the semester.

In my tutorial this week, a rather interesting yet trivial concept was discussed to highlight the fact that socialisation occurs in all aspects of our lives, including the ones that seem relatively insignificant. The tutor asked the class which way each person believes the toilet paper should hang, whether it be "In" facing the wall, or "Out", facing the person using it. Ten people in the class voted "In" and thirteen voted "Out" which prompted the class to discuss the reasons behind the belief that the toilet paper should hang "In" or "Out". For me, I believe this relates to one's opinion of what is the social norm. I voted for "Out", because to me that is the social norm. In my house, the toilet paper faces out so due to socialisation and the opinion of my family that the toilet paper should face outwards, I believe it should be also. Many reasons were suggested for both opinions including accessibility, appearance and presentation. (F, 18)

In the above quotation and her further discussion of the exercise, she was able to connect up not just socialisation, but that it "occurs in all aspects of our lives." She accurately reported the exercise and the results from it, using language from the discussion about beliefs, social norms, unspoken social rules, and interaction.

Early days developing reflective capacity

This next confident young man got a little confused between the importance of how toilet paper should hang ("why it is important to do so"), and the importance of understanding such behaviour in sociological terms. It is worth noting, however, that he is at least connecting first-lecture material including theorists with everyday practices about daily/minor social rules in bathrooms.

> I found it interesting to read about the beginnings of sociology (e.g. Max Weber's view). Even better was the tutorial I took part in which introduced us to the world of sociology from a more fun perspective. We discussed why it was that we hang toilet paper in the fashion that we do, and why it is important to do so, we came up with reasons (more aesthetically pleasing, or we were brought up doing it that way). It was good to get to the tutorial so that we could reflect on the lecture and perhaps receive a simpler explanation of what sociology was all about, the way people fold their toilet paper was actually a very good way of showing us how sociology affects our everyday lives in such a way. It got us thinking on a much broader scale to the other activities we partake in, in our lives from the simplest reasons about why we hang the toilet paper the way we do to the more complicated reasons for the groups we fit into, for example, our religion or even our football teams. Studying sociology in this in-depth and broad fashion will hopefully shed some light on the reasons why society is changing the way it is and even how this may affect myself and others in the future. (M, 18)

Certainly it is only the beginning of a paradigm shift to thinking academically, but in week one, the sense of engagement, linking theory and practice, and seeing possible future applications for life reflection is pleasing to observe, and a useful start.

The final two examples are brief commentaries from individuals in different tutorial groups from one another:

> This afternoon was my first sociology tutorial. The class performed an exercise in the form of a survey relating to how we prefer our toilet roll to sit (the toilet paper hanging on the inside or the outside). I was one of the few people who were mainly women who selected "In". I found this exercise rather quite interesting due to the fact that most of the people who selected "In" were women. (F, 24)

The example above describes a core sociological issue: a usually invisible issue about toilet paper is also found to be, somehow, a gendered one: a valuable insight that may eventually lead a long way. And in the final, slightly more cryptic, journal entry below, this student managed to note down and link concepts of norms, social failure, affordable luxury (an idea introduced into the class discussion), and implicitly comment on socialisation ("What's been done at home").

> The "norms" of which toilet paper hangs. The majority of students claim "Out"—what makes a person decide which way is acceptable to hang the toilet paper; perhaps it depends on what's been done at home. My mother would always have her bathroom and house immaculately kept—if house untidy = "social failure". The principle of "affordable luxury"—can't afford all the luxuries in life such as travel and dining although can afford simple pleasures—shells on toilet paper and potpourri. (F, 18)

There are several possible reasons that two out of the eleven students did not refer to the exercise in the first week; both of these concentrated on summarising the first week's lecture content. The nine student journals explored here show variable responses to the exercise, as is to be expected. Yet, all, with perhaps one exception, in some way demonstrate preliminary fusion of academic concepts and daily social interaction. While obviously early days in what for many will be a significant paradigm shift in becoming more academically sophisticated, and not all will make a long-term shift to a sociological perspective, the purpose of the toilet paper exercise is illuminated in their receipt and interpretation of the exercise in these journal reports. The median overall subject mark of these students was seventy per cent compared with the subject mean of 64 per cent, and their marks ranged from 60-77 percent, compared with the course range of 3–94 percent (excluding withdraws and did-

not-completes). This is a strong result from mid-grade students considering their relative youthfulness, several of them showing sustained engagement and effort throughout the course.

Discussion

The teaching and learning objective in this small evaluative study was to utilise students' written commentary from their reflective journals to make some assessment of the pedagogy of the teaching exercise beyond immediate in-the-moment responses of class members. This was coupled with a hoped-for second possible outcome from closely reading the reflexive journals—enabling comment to be made on the difficultly that busy and committed teaching staff have in capturing evaluation of student learning processes despite the desirability of doing so. For both of these purposes, making use of students' written commentary on the toilet paper exercise as direct, first-person evidence, even though this method is not completely free of its own validity concerns, offers insights for reflective pedagogy.

Lukowiak and Hunzicker (2013, p. 55ff.) identify several reasons contributing to student learning, some more "how" and others more "why" factors: attention, active participation in discussion, encouragement to higher order thinking, relevant information and assignments, a sense of emotional connection to the content and positive interactions with the instructor. It was a mix of these factors that caught students' focus in writing up their journal entries—ranging from the sense of class fun, making their own everyday world explicit, to acquiring or conjuring a concept or two to interpret the class exercise discussion.

The three-fold categorisation of student writing showed these elements within non-reflectors, reflectors and critical reflectors. The categorisation was not undertaken in the present inquiry to assess students, but to provide an opportunity for the instructor to reflect on what students appeared to "get" or not "get" from the toilet paper classroom exercise. That is, the attempt was to learn as educators from what students were learning. Wong et al.'s (1995) finding that the three-fold classification worked reliably for them shows itself to be also helpful here in organising and interpreting these student journal responses, but it does not exhaust reflection on teaching and learning here. A journal may contribute a lived/living quality to the learning process, but it is the succession of entries, and the changing self over time that most commonly illustrates deepened understanding.

This in turn raises an epistemological question. Does an apparently insightful comment mean understanding has taken place? Conversely, does the absence of a comment mean a new student has not made a step in understanding? Reducing the many gradations of reflective journal quality of Boud et al.'s (1985) finer-grained categories, even past the three types of reflectors used here, to the even more basic Hubbs and Brand's (2010) two dimensions of reflection (superficial/analytic), and content (inward/outward) or something similar, may be shown in further investigation to be a more appropriate mode of testing this kind of teaching and learning situation. Why is this so?

Clearly one student seemed to "get" very little about possible theoretical points arising from the class discussion of how household toilet-paper rules are constructed and embedded so that they are invisible. Her description of the exercise was no more than appropriate compliance to completing a weekly journal entry. At the other end of the scale, several students' journal contributions showed elements of critical insight, though it would be overstating the case to say these constituted critical analysis: linking with the lecture material, bringing theorists' names into the reflection. Even the insight that bathrooms and bathroom protocols and roles are deeply gendered, while an important reflection, is not yet unambiguously—on the written evidence here—a critical analysis of gender and household practices. Teachers of first-year undergraduates would not expect it to be, for either space reasons in students' journals, or stage of students' entry to the subject.

The bulk of the comments characterise their authors as reflectors, not devoid of insight but too early yet to be showing critical evaluation of new things being learned in the class exercise. While the major proportion of students in this middle category is not unexpected on the earlier Boud et al. (1985) and Wong et al. (1995) research with postgraduate and practicum learners, the present inquiry shows limits of reflective diaries to capture exactly what—is learned (here the embryonic beginning of undergraduate learning) even though there is undoubtedly important long-term learning contained within the reflection. It may be the class exercise experience has a pivotal role in starting people in the

desired learning direction, but probably a longer time frame is needed to "see" what it was that was being learned in the class exercise. Thus, the expectations of what instructors can gain from reflecting on student diaries must be tempered. This would apply for almost any methodology applied to this situation—not because of the effectiveness of different types of research instruments, but because of the inchoate, still-forming nature of learning inside students' heads.

The analogy of the butterfly effect (Bishop, 2008, pp. 520–521) challenges notions of linearity and any simple additive or accumulation model of learning. Applying this analogy to the start of undergraduate study, it might be proposed that learning

> … in nearly identical states, however, will evolve in radically different ways in a relatively short time period because of extreme sensitivity to the smallest changes in initial states. This latter behaviour has been popularized in the provocative "butterfly effect," the idea that the flapping of a butterfly's wings in Argentina could cause a tornado in Texas three weeks later, say.

Other disciplines also introspect on possible applications in their field (e.g. Pryor & Bright, 2003) of non-sequential learning and the effects of complexity in how learning progresses.

Academic teachers themselves learning from what and how well students appear to be learning in terms of this "butterfly effect" concept from chaos theory—valuable as this idea is—can see this does not guarantee ratification that what we are doing as teachers is having the desired learning consequences. However, it does sensitise to the importance of any glimmer of insights that may be generated by efforts at innovative teaching practice. Creating positive "initial conditions" might be expected to contribute to desired emergent learning effects that may be, and should be occurring, in contrast to negative educational start-up learning effects. The overall point is the impossibility of fully controlling those emergent initial conditions, or strictly evaluating them either.

Conclusion

The analysis of student journals brings the discussion back to teachers reflecting on their teaching, learning from the learners. These findings do not quantify how students made links with academic concepts such as "gendered division of household labour" operating in the bathroom, or how deeply learning possibilities about invisible norms have been opened up. Did instead, students "get" the part of the exercise that talked about different social class "requirements" in maintaining household aesthetic rules about toilet paper matching towel colour? Or perhaps some other insight?

The study lends confirmation to good things happening in students' learning from this class exercise, but with provisos about how this works differently for different students. So, it is not just a broad, "this worked well," result. Further reflection suggests three pedagogical benefits. First, solid engagement in the classroom and on students' journal pages is surely a simple but important measure of "initial conditions" of learning, student by student. Second, the class exercise's influence on the initial conditions may be just a first crack in youthfully naturalised lives. Third, active teacher learning in this review of one teaching exercise opens up insights how specific teaching situations can be checked and revised even "on the fly" not simply through formal processes. The creativity of front-line classroom teaching and learning meets limits in what can fully and finally be inferred about students' learning now or whether student leaning will come to pass later on, beyond the teaching period.

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