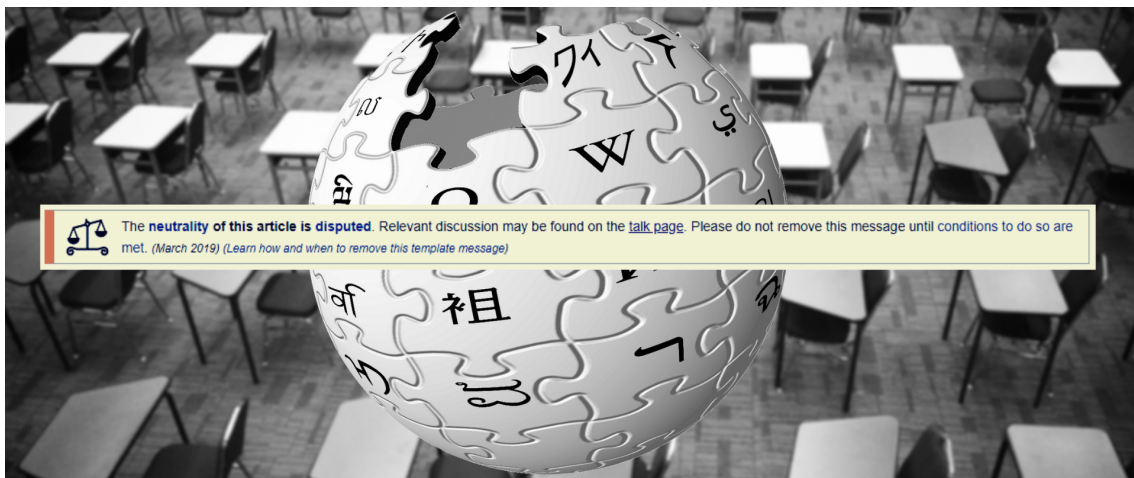


Pedagogy and the Language of Disciplines: A Classroom Experiment Using Wikipedia

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Thinking about the question of pedagogy needs us to reflect on the “skills” pertinent to different forms of disciplinary knowledge. This article reflects on an experiment in designing a writing course with the explicit intention of making students appreciate the manner in which a consensual regime of facts is established, so that it could become the basis for higher-order activities like argumentation.

In a significant way, knowledge in higher education is divided into disciplines. Disciplines form some kind of semi-permanent receptacles and organisers of knowledge. To produce knowledge, more often than not, means to produce knowledge within a discipline. However, in an equally significant way, knowledge can be divided into particular skills. The skill sets in higher education are somewhat similar to the idea of the “three Rs” in school education—reading, writing, and arithmetic. A large part of disciplines depends primarily on argumentation and description in verbal language (humanities, social sciences), another part primarily on mathematical knowledge (physics, quantitative economics), a third on algorithmic or computational knowledge (computer science, certain aspects of modern biology), a fourth on visual or form-based knowledge (architecture, music and art), and another part on knowledge of substances or materials (chemistry, molecular biology, civil engineering). In fact, most disciplines use one or many of these skills in differing degrees of importance. This list can be extended and nuanced, but the important takeaway is that it is

possible to talk about higher education in terms of a systematic combination of these skills. Each of these skills can be considered a “language” that has to be mastered.

We could think of university education as equipping students to handle one or many of these languages or skills. An important aspect of research is that a researcher uses the resources offered by a particular language and builds a body of knowledge within a discipline. The teaching space is a mirror of that process. A teacher uses the body of knowledge built in a discipline to train the student in handling the particular language. It is this aspect that often goes out of focus in our educational thinking. We fail to appreciate the uniqueness of the pedagogical process if we fail to see that, within a classroom, the disciplines are instances of particular languages. The goal is not only to transmit the knowledge accrued in the discipline, but also to equip the student in handling the particular language in which the discipline works. I use the term “handling” to focus on the judgmental and reflective aspects that form part of such skill. A language does not always offer formulas that can be readily applied. There are no standard operating procedures in solving research problems in mathematics or sociology. There are some broad heuristics, some core syntactic rules, that are made apparent mostly when they are breached rather than when they are followed. The real test for a competent use of a language is not whether you can form a correct sentence in that language, but about whether you can appreciate a joke, for instance. A joke, especially a linguistic joke, plays on the edge of the permissible ways of using a language. Similarly, mathematical, algorithmic, formal and all such knowledge require the capacity to appreciate the nuance in handling it rather than use it like a set rule engine.

Mastering a “Language”

This preface is to reflect on one such experiment to equip university students to master a language. At Ahmedabad University where I am based, we want to create writing courses for undergraduate students that equip them to navigate their subject-specific courses better. By administering a diagnostic test for English language competence (reading, comprehension, and basic writing), the entire incoming batch of students was sorted into three groups: those that had to take one, two, or three semester-long courses in reading and writing based on their scores in the test. The three courses were Elements of Writing, Effective Reading and Communication Skills, and Advanced Writing, each course being more complex than the previous one. The course, Advanced Writing, was meant to train students in long-form writing for professional and formal contexts. There may not be many places outside academia and the media, where long-form writing is considered a need. Our rationale was that the rigour of training in long-form writing actually contains within it a range of tools that are usable in many contexts such as persuasion, professional communication, and even argumentation. This was a studio course with three components of writing. The students wrote three 2000-word pieces through the entire semester: an encyclopedic article, an opinion piece, and a reportage or a narrative piece. The encyclopedic article taught students on how to organise the available facts on a topic. The opinion piece required them to work in pairs, where one member in the group argued for a

position and the other against it. The third was in order to train students to stitch together a coherent and defensible narrative from the available facts, opinions, and conjectures on a topic, akin to an investigative report. All classes in the course were hands-on workshops where students wrote, edited, compared or reviewed drafts, and sought feedback from the instructors and their peers for three hours every week for 15 weeks.

Using Wikipedia as a tool, we sought to train students in encyclopedic writing. The encyclopedia, as a form, has both a grand and a mundane purpose. Its grand purpose, in line with the great 19th century European imagination, is to provide a synthesis, at once detailed and systematic, of all knowledge known to human beings.^[1] Its mundane purpose, as is evident from the Wikipedia today, is to provide information on potentially everything that could be important to someone, without any pretensions to synthesis. At any rate, writing a good encyclopedic article is a training in description, collection, narration and systematisation of facts. This is the first step in acquiring a sensitivity to the use of verbal language in the various disciplines. While arguments and theories are what students have to eventually deal with in their disciplines, at the base of such arguments is the capacity to establish stable and largely consensual descriptions of facts regarding an object of study. This is the skill we often bypass in the teaching process. As a result, students might know particular elements of a theory, a set of facts associated with it, and some general conclusions to be drawn. But they would not be sensitive to the 'making' aspect of knowledge.

An important aspect of the pedagogic practice is to make the student appreciate knowledge as an artefact and not as a found-object.^[2] In effect, knowledge is made and not found. All things made have been made by using some technique, skill, or judgment that has been perfected over time. Things made, because they are results of human action and deliberation, can potentially be made in other ways than the way in which we find them. These made things need to be appreciated from the point of view of the procedures that have gone into their making. In effect, made things are infinitely perfectible, despite the practical limits to achieving such perfection. Insofar as knowledge is an artefact, all these points hold good for a piece of knowledge too. Training students to appreciate a piece of knowledge requires that they are trained to see knowledge as a result of procedures perfected over time and as being infinitely perfectible.

The making aspect of knowledge involves at least these two sets of abilities. First, being knowledgeable about something necessarily involves the capacity to acquaint oneself with the way knowledge is represented. Apart from highly technical representational devices like algorithms, maps, artefacts and computer programmes, the most general way knowledge is represented is in the form of arguments, descriptions, narratives, hypothesis, and theories. Paying attention to the aspect of representation of knowledge is an important element in acquiring knowledge itself. The emphasis here is not merely on knowing a subject as a set of canonical statements, but as a series of questions, puzzles, procedures, allowances and

disallowances made possible by the use of specific representational devices. Second, the making aspect involves learning how to transform general intuitions into researchable questions. This includes how to generate, curate and present new kinds of resources, how to evaluate ideas and artefacts, and, most importantly, how to share one's learning with a peer group as well as a general audience. The ability to activate these forms of learning are central to all levels of university teaching and research.

An Experiment with the English Wikipedia

The Wikipedia project gave both the faculty and the students involved in it multiple occasions to reflect on such questions in a very hands-on and immediate manner. This project required students to select a topic, preferably one on which an entry did not already exist on Wikipedia, and write a 2000-word entry, with references, external links, hyperlinks, images and text boxes, exactly in the format of Wikipedia. The challenge was to submit these articles to the English Wikipedia review process that is quite stringent (and a good indicator of quality) and get past it.

When students chose a particular topic on which to write an encyclopedic entry, they had to debate the public significance of the topic in the class. One group of students decided to write on a specific breed of buffalo, the Banni buffalo, unique to a region in Gujarat. Someone else wanted to write on Seva Café, a pay-forward experiment in community kitchen and dining, influenced by M K Gandhi's concept of *seva* and trusteeship. A third student proposed to write on *Bombay Dost*, the first magazine in India dedicated to LGBT issues. Another group of students were keen on writing about Aranya Johar, a young Indian slam poet. Each of us had differing evaluations on the public significance of these topics. Some felt that Aranya Johar was too fleeting a phenomenon to merit a Wikipedia page, whereas the Seva Café is a more "substantial" topic. Most people were indifferent about the Banni buffalo, but *Bombay Dost* seemed a consensual candidate for a significant topic. However, it turned out that the material available on Seva Café that was verified and from third-party sources, was very little and so it had to be dropped. Aranya Johar now has a Wikipedia page thanks to the students of this course. The Banni buffalo also ended up becoming a very mature article on Wikipedia. This was possible because students had worked hard to source information from several types of sources apart from routine websites of newspapers, and had created a rigorous peer-reviewing process amongst themselves. They also responded, point-by-point, to feedback from their peers and the faculty, thus removing the clutter that forms part of most undergraduate writing.

There was an important learning in this process. Our personal proclivities and evaluation of facts and the way those facts are weighed in the larger public domain do not always match. In most research situations, it is not outright false information that is the problem as much as "cold facts."^[3] Cold facts are those facts discovered without a guiding heuristic, mostly randomly, or even serendipitously. These are a problem because there is no way of fitting them into any coherent explanatory frame. There is a rather distorting tendency in popular

writing about science and innovation, where these accidentally discovered cold facts are made to look like heroes in a story of scientific success. That piece of fossil bone which revolutionised genetic science, that falling apple which gave Newtonian mechanics, and the curious wobble of a heavenly body which resulted in the discovery of a new planet are all favourite rhetorical armoury in a self-educated person's didactics. While it is true that a good scientist should be sensitive to such cold facts or anomalies, in matters of society, politics, and education, the problem of the cold fact takes on an even more complex dimension. Most polarising public discourse depends on such cold facts—a column of deities found after excavating a mosque, a political leader photographed exchanging a hearty smile with the Viceroy's wife, a WhatsApp forward showing a sentence from the Vedas mentioning atoms. The list goes on. These then become the skeleton on which an entire edifice of dubious theories are built. And because these facts themselves are not wrong, it is somehow assumed that the theories built upon them are also not wrong. We fail to appreciate that it is the theories that lend structure to facts and not the other way round. While the course did not aim to introduce any such meta-theoretical discussions, the lesson about facts was conveyed indirectly: a fact formulated without a procedure of arriving at it is worthless. In the age of the ubiquity of fake news and post-truth apologetics, this lesson, in itself, was a worthy takeaway from a writing course.

Once the topics were settled upon, there were newer challenges. Someone wrote an entry on the online food delivery app, Swiggy, that was promptly deleted by the other Wikipedia editors. This was because the article contained nothing more than what could anyway be displayed on the Swiggy website. Clearly, self-representation cannot count as facts. The distinction between what I say about myself and what is known about me is both an ethical and a technical matter. Am I a miserly person is a question that can never be answered by asking me. It can only be answered by asking others about me. The problem is not only that I might lie about myself but that it is a wrong kind of question to be asking me, as I do not have access to the perspective needed to answer such a question. Similarly, the question whether the government is ensuring the betterment of farmers is never to be answered by only looking into government files.

Most of our perspectives are conditioned by our socialisation. In itself that is not a thing to be lamented. However, education, in its very purpose, is an effort at getting students to think deliberately rather than think in the category habits available to them through their socialisation. In this way, education is, very rightly, an alienating process. The most concrete way this lesson can be imparted to young students, without lecturing them on the philosophy of education, is to make them see the importance of assembling facts that move beyond self-representations. This was our second lesson.

Another article created in this experiment was on Auto World, the famous vintage car museum in Ahmedabad. Again, this article was rejected by Wikipedia because the sources cited were referencing themselves and each other. An echo chamber does not amplify the facts as much as increase the noise. Questionable research, conspiracy theories, and fake

news, and even silly gossip, all share a common feature; they work within a looped path of referencing. A very small number of sources keep getting cited again and again and every time the intensity of the message goes down, a new amplification is achieved by using roughly the same reference points. Be it physics or news, facts are nodes in a network of beliefs and they are only as credible as the larger network is. This was the third lesson.

Lest we forget, all these experiments in encyclopedic writing were carried out by young undergraduate students. One student felt that the writing course was not teaching him anything worthwhile, but instead making him spend precious class time chasing references for a Wikipedia article. The rest of the students were chasing those references and polishing their phrases to ensure a neutral point of view and objectivity in their writing. These are some of the parameters that Wikipedia lists as desirable in their articles. The students spent time analysing mature Wikipedia articles to learn this lesson. In the Talk page that forms the backend of every Wikipedia article, they read the pointed, sharp and sometimes acrimonious debates that contributors have had in order to challenge or establish a particular way of representing facts. For instance, the Wikipedia Talk page on the article about J Jayalalithaa debates many aspects of her life. One editor claimed that gossip magazines cannot be a valid source of information about her relationship with the actor M G Ramachandran. Another editor said that there is nothing called gossip magazines, and given that many in Tamil Nadu take these magazines seriously, that is reason enough to use them as sources. Someone else upped the ante by stating that the threshold for inclusion on Wikipedia is verifiability and not truth. Whatever be the final outcome of such debates, the point of interest is that such debates have formed part of establishing a fact. Objectivity involves following the procedure of establishing a consensual and neutral representation abstracting from the many available representations about an object.

Of course, amidst all this, there was the occasional student who learnt how to edit the Wikipedia and then vandalised a page or two. Promptly, the errors were corrected by someone else.

Experiment with the EPW

In fact, *EPW* has also been an unsuspecting subject of our experiments in teaching writing. Alongside creating articles, we wanted students to read well-researched papers in the *EPW*, among others, and comment responsibly and intelligently in the comments sections of the journal website. Woefully, as any college teacher would attest, the textbook forms the paradigm of reading for many students. They are trained to read in order to glean the facts, as it were. Our purpose was to alter that understanding of reading and provide an alternative paradigm—reading as a step to participate in a larger conversation. The results of this experiment were between good and indifferent. In many cases, we could not get the students to go beyond summarising the article while commenting on it. Perhaps, the authors of some of those articles would find the comments useful to know how undergraduate students understand scholarly articles. I would like to believe that despite these hurdles, we

were able to get across a key lesson that the process of learning is best captured in the ability of the students to participate in an ongoing conversation about the subject, rather than merely in the ability to shore up the facts presented by it.

The Way Ahead

As this was a course designed in the form of a writing studio, the portfolio of writing that students produced through the semester became their assessment. They would be awarded a grade for a first draft, and they had the option of improving their grades by continuously working on their drafts and refining them. It is hard to know immediately how this learning would impact their approach to the study of other courses. However, our intuition is that as with learning most skills, where once a skill is learnt, it is difficult to behave in the way one behaved prior to the learning of that skill. It is difficult for a trained batsman to tolerate an inelegant cross-batted shot in cricket, just as it is difficult for musicians to tolerate themselves or others going off key. Our results in the future will justify or challenge this intuition. These experiments may not be valuable for their novelty. Their value lies elsewhere: in activating a research reflex, in bringing attention back to the skill or the “language” of a discipline in place of already assembled content.

End Notes:

[1] The Hegelian Encyclopedia, or the Encyclopedia of the Philosophical Sciences (1817) of the German philosopher G W F Hegel sought to ground all knowledge in a closed philosophical system and demonstrate their internal logical unity. This grand project itself was a reflection of its times with very similar Encyclopaedia projects aiming to systematise knowledge by grounding it in one or the other philosophical theory of knowledge. The Encyclopedia Perthensis (1796-1806), the Encyclopedia Metropolitana (1817 to 1845), and the Penny Cyclopaedia (1833-43), published in Britain, are some examples from just the English-speaking world. Interestingly, in many of these books, entries were arranged based on topics and systems rather than the more arbitrary style of alphabetical arrangement that is the general norm today. The history of the Encyclopedia Britannica, first published in 1768, could be read as a record of the shifting scope and aims of an Encyclopedia, which began as a systematisation and unification of all knowledge to its more modest claims today of systematically presenting all available knowledge about particular objects.

[2] While I use this term from general discourse, Camic (2010) gives a good theoretical overview of the issues involved in categorising something as a found object.

[3] At the descriptive level, philosophers of science talk about the theory-laden-ness of facts, to show how facts are always already facts of a theory and how it is philosophically naive to hold onto a picture of facts as independently observable basic units. (Brewer and Lambert

2001) My usage of the idea of cold facts is a much weaker, and hence innocuous, rendition of that point.

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