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Good teaching is more a giving of right questions than a giving of right answers.

Josef Albers, (1888-1976) artist and educator

Rather than jumping straight into the answers, let's try to start students off with the sort of questions that encourage them to do their own seeking.

Marianne Stenger, education research especially in online delivery

Quick Writes and Questioning

(Reading time: 6 minutes)

Asking students 2-3 related Quick Write questions in succession starting with one based on knowledge or understanding and then moving up Bloom's taxonomy to higher-order questions can encourage engagement and critical thinking.

"Encouraging critical thinking with 3 questions" is a 2018 TEDxXiguan talk by Brian Oshiro¹. In his talk, he first outlines the importance of having teachers ask questions "to engage students", "to ensure they stay on task" and "to check for understanding." He then goes on to illustrate that "not all questions are created equally." He identifies questions that access student knowledge and other, higher-order questions that allow students to apply this knowledge and make judgements.

CRASH - Bloom's taxonomy²! Bloom's taxonomy (1948) describes higher-level thinking skills as falling on a continuum beyond knowledge (the recalling of facts) and comprehension (the understanding of the facts) incorporating application (problem-solving), analysis (finding evidence), synthesis (combining elements) and evaluation (making

¹ Oshiro, B (2018, August) Encouraging critical thinking with 3 questions [Video file] Retrieved from https://www.ted.com/talks/brian_oshiro_encourage_critical_thinking_with_3_questions

² Schinkel, S.L. (2019, March 14). How do I love Bloom's Taxonomy...let me count the ways... [Blog post]. Retrieved from mygrowthmindset.home.blog/2019/03/14/how-do-i-love-blooms-taxonomy-let-me-count-the-ways/



CRASH OF IDEAS SERIES

'Integrative thinking': a conscious way of synthesizing two or more ideas to come up with one new and superior idea. Roger Martin, past-Dean Rotman, Univ. of Toronto



judgements).³ Brian then presents his model: You need to ask questions in a specific order, starting with a knowledge or comprehension question followed by a higher-order question. As is common, if you only ask knowledge questions, there is no opportunity for students to apply this knowledge. If, on the other hand, you only ask the tougher application and evaluation questions that demand critical thinking, it may result in student frustration.

CRASH – Quick Writes! A Quick Write is a short, in class, written response to a question or prompt.⁴ As a result, it is inclusive as everyone is given a minute or so to complete it. It provides the students private (or group) time to formulate a response, which in turn drives participation and discussion as it removes the stress of answering spontaneously. Depending on the timing of the question, it can be used to gauge knowledge and understanding as a diagnostic (before instruction), formatively (during instruction) or as summative assessment (after instruction). Again, linking back to Bloom’s taxonomy, the type of question can be knowledge-based, or require high-order thinking skills like analysis, synthesis or judgement. As a result, Quick Writes are a very flexible tool which have been found to be very effective in practice.⁵ Instead of interspersing single Quick Writes of different types and thinking levels in a lecture or online presentation, Brian’s model would inform instructors to use two or three Quick Writes sequentially while moving up Bloom’s taxonomy from assessing understanding to higher-order questions. In so doing, each student’s thinking is allowed to progress from the straightforward to the more difficult and riskier questions. These higher-order questions stimulate creativity and critical thinking as a result of the uncertainty and lack of a single correct answer. Brian identifies them as riskier as the student’s response may be unfavourably judged by the instructor and their peers.

CRASH – The Greatest Management Principle! In his book “The Greatest Management Principle in the World,” Michael LeBoeuf’s thesis is, “What gets rewarded gets done.”⁶ In the case of risk-taking, he recommends recognition. So, it is incumbent on instructors to encourage and congratulate students who are employing and developing their higher-order skills regardless of any shortcomings in the response. Making errors in a safe environment is a valuable learning experience. Indeed, shortcomings can be further built on through additional questions. For this reason, judging or grading Quick Writes on the basis of effort as opposed to so-called correctness is also important to encourage participation, risk-taking and the learning that comes from it.

³ Bloom’s Taxonomy: Teacher Planning Kit <https://www.cebm.net/wp-content/uploads/2016/09/Blooms-Taxonomy-Teacher-Planning-Kit.pdf>

⁴ Barkley, E. F., & Major, C. H. (2016). Learning assessment techniques: a handbook for college faculty. San Francisco, CA: Jossey-Bass & Pfeiffer Imprints, Wiley.

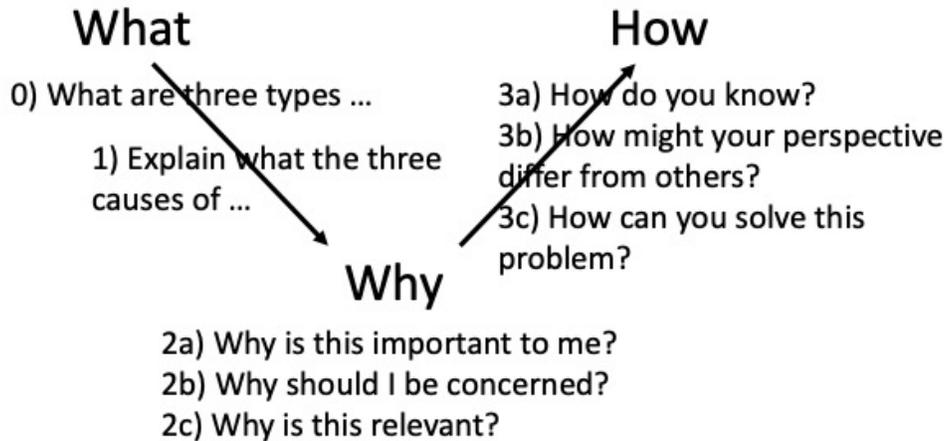
⁵ For more information on Quick Writes including a 25’ video recording by the author, see <https://duncanjones.weebly.com/8/post/2019/03/quick-write-live.html>

⁶ LeBoeuf, M. (1985). The greatest management principle in the world. Putnam Pub Group



Brian further elaborates on his model and the progression of questions as illustrated in Figure 1. As with Bloom's taxonomy, his questioning moves from whats (0 is weak, 1 being stronger), to whys, to hows.

Figure 1: Annotated version of Brian Oshiro's 3 question model.



Integrating these ideas and processes can generate an improved Quick Write format as follows:

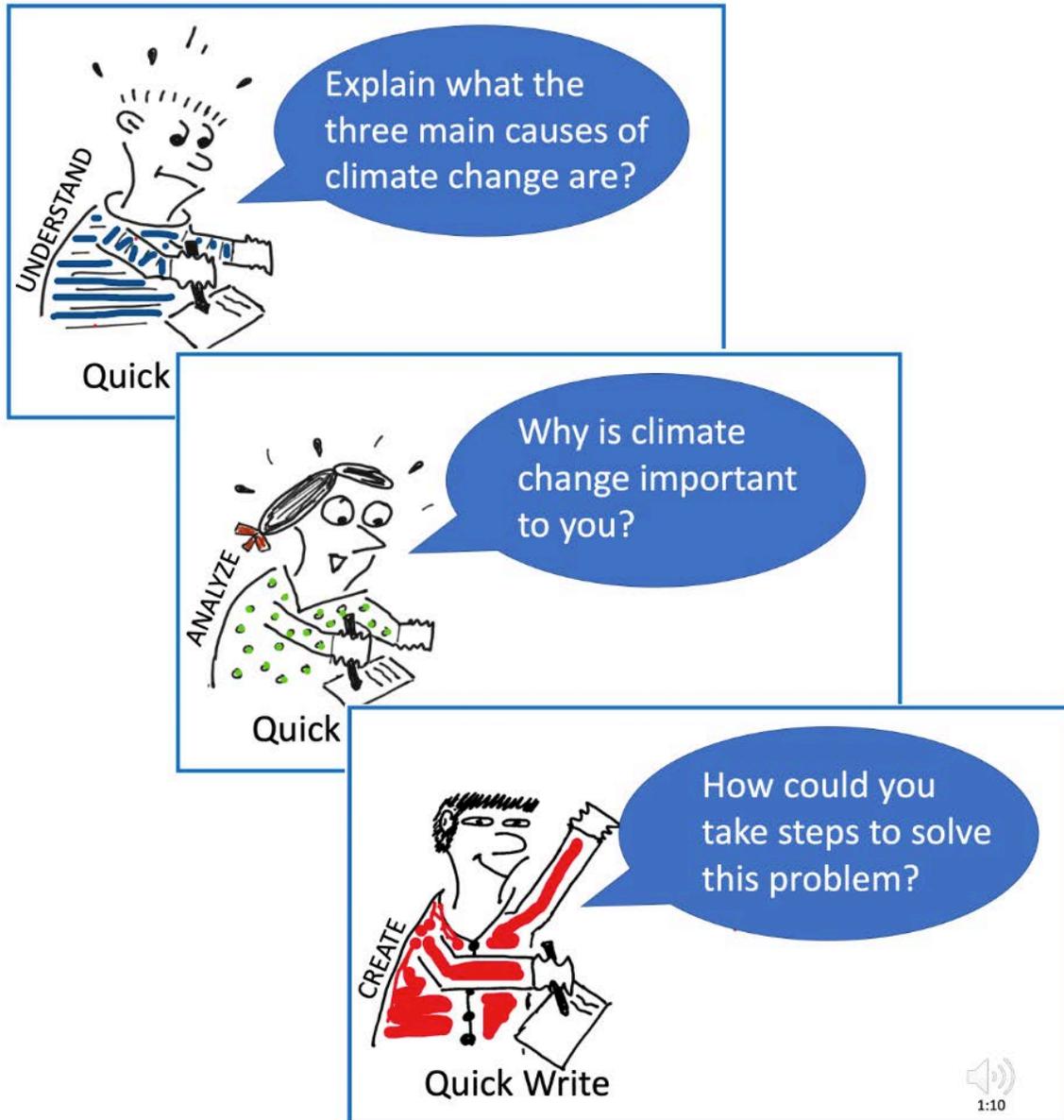
- Ask two or three sequential questions, starting with knowledge or comprehension (What) and moving to application, analysis, synthesis and evaluation (Why and How). For a strong list of questions refer to Bloom's Taxonomy: Teacher Planning Kit.³
- Employ these questions as a diagnostic, formatively and summatively.
- Provide students time to develop their responses and commit them to paper.
- Allocate sufficient time to encourage discussion of the responses.
- Recognize the efforts of all participants.
- Plan these questions as much as possible and list them on slides. However, don't hesitate to raise further questions spontaneously as appropriate. An example of a series of PowerPoint slides is shown in Figure 3. Each slide is colour-coded and labelled to match one of the six levels of Bloom's Taxonomy.

Brian Orshiro's insight, as outlined in his 2018 TEDxXiguan talk, was the value of sequential questions that move up Bloom's taxonomy from assessing knowledge and understanding to higher-order questions. In doing so, all students gain, not only domain knowledge, but also the opportunity to develop creative and critical thinking skills and learn from one another. Pairing this insight with the advantages of the Quick Write process is expected to improve engagement and learning outcomes. As Brian states, "The process



(also) encourages further, deeper thinking when students themselves come up with the questions to ask their peers – having the students ask the questions also establishes a kind of ‘critical thinking norm’ in the class.⁷”

Figure 2: Example Sequential Quick Write PowerPoint slides^{8,9}



⁷ Personal communication.

⁸ Drawn by the author in order not to violate the copyrights of others. In practice, a 45 second to 2 minute open source piece of music is embedded in and played alongside the slides to secure timing minimums.

⁹ The questions are derived from Brian Oshiro’s 2018 TEDxXiguan talk.

