
INTERVIEWING DR. BILL COPE AND DR. MARY KALANTZIS: NEW TIMES, NEW LEARNING

ENTREVISTANDO DR. BILL COPE E DR^a. MARY KALANTZIS: NOVOS TEMPOS, NOVO ENSINO

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From August 2016 to January 2017, I was a visiting scholar at the University of Illinois at Urbana-Champaign, being supervised by Dr. Bill Cope. At UIUC, Dr. Cope is a Professor in the Department of Educational Policy Studies as well as the Director of Common Ground Research Networks, a not-for-profit scholarly publisher and software development house. His wife, Dr. Mary Kalantzis, who was Dean of the College of Education at UIUC for 10 years, is now a Professor in the Department of Education, Policy, Organization and Leadership at UIUC. In spite of their outstanding performance as researchers and professors, Cope and Kalantzis are mainly known for having been members of The New London Group – a group of researchers who met back in 1994, in the city of New London in the USA, to discuss literacies and the future of education. Nowadays, they can be said to be the main proponents of the Multiliteracies pedagogy. Together, Cope and Kalantzis have co-authored or edited several books such as: *Multiliteracies: Literacy Learning and the Design of Social Futures* (2000), *New Learning: Elements of a Science of Education* (2008; 2012), *Ubiquitous Learning* (2009), *A Pedagogy of Multiliteracies: Learning by Design* (2015), *Literacies* (2012; 2016), and *E-Learning Ecologies* (2017).

On November 29th and 30th, 2017, we had the pleasure to receive Dr. Bill Cope and Dr. Mary Kalantzis at the Federal University of Paraná (UFPR), in Brazil. At UFPR, they gave a workshop entitled 'Getting to know the Scholar platform' as well as two lectures: 'Multiliteracies: Meaning Making and Learning in the Era of Digital text' and 'Big Data Comes to School: Implications for Learning, Assessment and Research'.

This interview addresses and expands a few key issues that were presented in these three academic events held at UFPR.

Questions to Dr. Mary Kalantzis:

1. You say there are three things that make an impact on learners' performance: diversity, multimodality and pedagogy. Can you comment on each one of these things, clarifying how they make an impact on learners' performance?

Let me take these three ideas one by one. First, diversity—our heritage architecture in schools has been what I call “an architecture of sameness.” All the students are regraded in the same way, in the same class at the same time, listening to the teacher speak, whose orientation must be to the (largely imagined) “middle of the class.” All students must be more or less on the same page of the textbook at the same time. Then they need to finish at the same time to take the “standardized” test—standardized in the sense that they will all be judged for their performance against the same measure.

But, of course, students are different—in their socio-cultural and linguistic backgrounds, experiences, interests, modes of engagement, and the pace of their learning. These differences are mostly ignored in a traditional classroom. In fact, against the standard, in the end we insist on only one significant kind of difference, and that is the measure of inequality of performance outcomes measured against a “normal” distribution curve. The only difference we allow is inequality of outcomes. In fact, we insist on this by measuring against the standard/normal.

Now, we have another notion of diversity—that students come to class with different socio-cultural and linguistic backgrounds, experiences, interests, and modes of engagement. We need to recognize and actively engage with this diversity, in fact to valorize it. Students do not have to be on the same page at the same time. They do not have to learn at the same pace. They can choose topics that connect with their experiences and build on their interests. They can learn from each other's differences.

In contrast to the architecture of sameness, we call this a learning ecology of productive diversity. Then, you don't have to be the same to be equal. The performance outcomes are comparable, but not identical. This requires different kinds of assessment, such as rubric-based review, rather than multiple choice tests. The goal must be the transformation of all learners through successful mastery of learning, not just keeping them busy with routine, instructional sequences, followed by tests.

Next, multimodality. By this, we mean to indicate that meanings are made not only in text, the stuff that can be put into the printed page of the textbook or the written page of the student workbook, but integrally meanings that can these days easily be digitally recorded by students, where text and be interleaved with image, video, audio, visualization, and dynamic dataset—to name just a few of the objects that can be created and used by students to represent what they know.

And connecting back to our diversity point, some students may be better at representing their knowledge in one way rather than another. By juxtaposition and transposition, and an underlying psychological process we call “synesthesia,” meanings can be expanded, enhanced, and elaborated upon. Visualizing beside text, for instance, may help someone who is good at imaging to become better at text. This is now possible because the digital allows for the manufacturing of alphabetic symbols, images and sounds, all to be rendered using the same media.

And lastly pedagogy—this is the conscious, purposeful design of learning environments by teachers. Teachers make choices from a repertoire of pedagogical approaches (experiential, conceptual, analytical, applied) that are appropriate for the subject/task, individuals/class. Linking back to the last two points, to ensure learner performance, this should cater to diversity, and in the era of digital media, use their broader affordances, e.g. instantaneous translation, ubiquitous learning, collaborative learning etc., for the learning activities of students.

2. How does the Multiliteracies/Learning by Design theory attend to diversity?

We have a broad theory of diversity, encompassing: material conditions (social class, locale and family); corporeal attributes (age, race, sex and sexuality, physical and mental abilities); and symbolic representations (language, ethnos, communities of commitment and genre). A full version of this theory is to be found in this open access article: <http://www.tandfonline.com/doi/full/10.1080/23265507.2016.1164616> This means that diversity is a very complex reality, and always multidimensional.

Meanwhile our pedagogy, as captured in the conceptualization of “Learning by Design,” focuses on the student as an active knowledge maker. The Learning by Design theory sets out to classify student activity types, or the range of “things you do to know.” These are experiential (experiencing the known and the new); conceptual (naming and theorizing), analytical (functional and critical analysis); and applied (appropriate and creative application).

Because our focus is on knowledge as activity, this gives more scope for learner agency than is possible in heritage curricula. Knowledge is not just cognition—factual memory and the application of procedures to create correct answers as is the predominant pedagogical orientation in heritage pedagogies. It is evidenced in epistemic actions, and the artifacts that students create through these actions. These may be multimodal reports, videos, documentary or data objects, for instance. If the old pedagogy was didactic-mimetic, the new is reflexive-ergative. Most importantly, there is much more scope for learner agency. Which leads us to the axiom: the more space for agency in learning, the more that differences become visible and productive to learning.

3. The concept of ‘design’ is a key concept in the Multiliteracies/Learn by Design pedagogy. What is implied in looking at teachers as designers?

First to consider “design” from a learner’s perspective: rather than learn the rules—of language, science ... or whatever subject—and getting them right, the learner/meaning-maker takes “available resources” of language, or the discipline of science, and builds their own knowledge representations. This is never just a matter

of replication. The learner redesigns meaning, reframes it with their own voice, creating a design that is never quite the same as the available designs from which they have drawn. This is the redesigned, a new meaning. So instead of meaning as replication and repetition, we have meaning as transformation and change.

Now, from a teacher's point of view, instructional design is the process of creating learning environments where students can be designers of meaning and knowledge—not the copiers or rememberers of traditional, didactic pedagogies.

*4. In the book *New Learning: Elements of a science of education* (2012), you and Dr. Cope write about being an educator in 'interesting times'. Could you comment on a few elements of *New Learning* that may help teachers be more prepared to face our 'interesting times'?*

“Interesting” is of course an irony. These are both the worst and best of times. Worst, in the sense, virulent chauvinisms have raised their ugly heads once again, inequalities are becoming more extreme, and education is under attack, in part, because by and large educators are critical of these tendencies.

Meanwhile, there are openings for us. One of these is the rise of digital media. In schools these could mean—in fact they often do mean—the revival of regressive pedagogies, in the form of computerized testing, e-textbooks, didactic video lectures, and hierarchically structured learning management systems. But at the same time, we have an opportunity to create the first major change since the invention of modern, mass-institutionalized education in the nineteenth century. And because we could create a radically new and radically better form of education in this moment, we must at the very least try.

5. Could you comment on ways of learning and ways of knowing that you consider relevant educators take into consideration when preparing their classes?

Stay mindful: diversity, multimodality, pedagogies which change the balance of learner agency! Consider yourself a professional co-operating with a range of other professionals and experts to experiment with technologies, not to reproduce the old but to explore the scope of the new that engages learner's interests in a way that genuinely transforms them.

Questions to Dr. Bill Cope:

1. In times when technology is everywhere, and may be seen by some as that what schools need to successfully engage students in learning processes, you provocatively say that "technology is pedagogically neutral". Could you comment on the relationship between technology and education?

Around us, we see many apparently new things happening with technologies in education. These are some: video lectures and the flipped classroom, e-textbooks, learning management systems, procedure-based intelligent tutors, lecture hall answer "clickers," electronic blackboards, computerized select-response assessments, and automated essay grading software, to name a few. We might find these, not only in conventional institutional settings, but also in new institutions and sites of learning—online schools, MOOCs, just-in-time online training and help menus embedded in software and entertainment interfaces. However, none of these things necessarily change pedagogy. They often have the same architectures of sameness as heritage schools. They often limit the scope for learner agency in the same ways. They often focus on memory work and correct application of procedural routines.

However, these technologies also offer us the chance to do something radically different and dramatically more effective measured in terms of learner performance. From learning that must be confined in time and space we can move to ubiquitous learning, at any time, in any place. From transmission pedagogy where learners are mere knowledge consumers, we can move to active knowledge makers where they are knowledge producers, engaging with available knowledge designs, and rebuilding

them as designs of their own. From traditional academic literacies, we can move to multimodal knowledge representations. From individual cognition, we can move to a recognition, deployment and valorization of collaborative intelligence. From a content and cognition focus, we can move to learning where learners are always moving backwards and forwards between this and metacognitive reflection in disciplinary practice. And from standardized learning in an epistemic architecture of sameness, we can move towards differentiated instruction.

These are seven affordances, seven things that technology makes more feasible: ubiquitous learning, active knowledge making, multimodal meaning, collaborative intelligence, metacognition and differentiated learning. In fact, many of these are old ambitions, as old as the work of Dewey, Montessori and Tagore a century ago, and even as old as Rousseau another century before. Technology now makes them easier to realize. And because we now can, we should.

2. Nowadays, we have access to several different educational platforms. Edmodo and Moodle are among the most frequently used in educational settings. You say CGScholar (Common Ground Scholar) is a Social Knowledge Space for Schools, Universities and Publishers. What are the affordances of Scholar? What can teachers and students do in this platform?

CGScholar is different from other platforms in several ways. First, it changes the role of the teacher and instructional designer from someone who delivers content to someone who scaffolds peer-to-peer interaction among learners themselves as designers of knowledge and meanings.

Next, CGScholar is multimodal, supporting the knowledge representations that can in the same screen include text, image, video, audio, mathematical notion, dynamic visualizations, datasets and any external media on the internet.

Then, CGScholar transforms assessment by embedding peer, self, teacher and machine assessment into the learning. All assessment is formative. Summative

assessment is no more than a retrospective view of assessment that has, in the first instance, been formative. All assessment is constructively *for learning*, not just retrospectively *of learning*. In fact, CGScholar sets out to abolish the distinction between assessment and instruction. All assessment is embedded in instruction. And there is no instruction without feedback. You can read more about this our chapter in this open access book: <https://www.taosinstitute.net/education-as-social-construction-contributions-to-theory-research-and-practice?ReturnUrl=LwB3AG8AcgBsAGQAcwBoAGEAcgBIAC0AYgBvAG8AawBzAA%3d%3d>

3. *You and Dr. Mary Kalantzis have recently published the book e-Learning Ecologies: Principles for New Learning and Assessment (2017). In your opinion, how may e-learning ecologies affect the way we assess students' knowledge?*

The biggest change is in the incidental recording of learning interactions in networked computing environments. We say “incidental” because this is a secondary effect, in the same way that emails, text messages and photo uploads are mainly about communication in the moment, but trace of these communicative actions is also recorded even when this is not the primary purpose. Much of education was ephemeral—classroom talk, textbook reading and student workbooks and the like. But in activity streams, discussion boards, educational games, content accessed, online work, everything is incidentally recorded.

We can put these incidental recordings to good use. This is because these recordings are stored in a place in “the cloud” where they are accessible to data mining and new software mediated processes of assessment called “learning analytics.” This makes possible a revolution in assessment, where everything the student does during their learning can be assessed.

Tests were always partial samplings of learning. Now everything can be analyzed. Tests came too late—at the end of the learning process, rather than contributing to the learning process. And they were strangely designed artifacts, different in form from

the artifacts and processes of instructions, and with a whole series of intrinsic limitations which we educators, not to mention hapless students, know all-too-well.

Learning ecologies with embedded learning analytics give students continuous, on-the-fly feedback (machine, peer, self and teacher feedback). They also give the teacher immediate and always up-to-date data on the effectiveness of their teaching, for the whole class and for individual students who may require special attention.

4. You have been researching and implementing recursive feedback in your online classes for a few years now. What are the main differences between conventional assessment and recursive feedback?

Traditional assessment systems are linear—you do your work, then you do the test, then you get your results. The end may be a B+, which only really tells you that you are a mediocre person. There is not much you can do other than vow to be a better human being in the next installment of your learning. The evaluation system has placed you on the normal distribution curve, where for a few to be adjudged smart, most must have been comparatively mediocre or stupid. (Let's be honest about the semantics of traditional grading!)

In the world of learning analytics, feedback is recursive. You can act on it, and you can see the effects of that acting, and you can continue to act until you have reached the objectives set by the teacher or curriculum. Mastery is possible. This has long been an objective of education, articulated half a century ago by Benjamin Bloom. Mastery learning processes—in Bloom's time, group work and special instruction for learners who are falling behind—have long been demonstrated to be effective. However, they were logistically challenging and resource intensive.

Learning analytics creates efficiencies that were not possible before computer-mediated learning. Students are able to check their progress on a continuous basis, and they can work towards mastery based on continuous, recursive feedback. This means that students can take greater responsibility for their learning. If you do not

reach expectations, it is not because you haven't been given a chance. If your score is not good, it isn't because you are mediocre or stupid; it's because you didn't do enough to meet the reasonable expectations of the instructional designer. (And if the expectations are not reasonable for you, this is the responsibility of the designer and the educational institutions.)

5. Can Big Data have a role in educational contexts? How do you envision Big Data being collected and used by educators at schools and universities?

Actually, big data is just small data, but there is a lot of it. Learning is no bigger than it ever was, it is just that there are many small datapoints.

This is our formal definition of big data in education: 1) the purposeful or incidental recording of activity and interactions in digitally-mediated, network-interconnected learning environments—the volume of which is unprecedented in large part because the datapoints are smaller and the recording is continuous; 2) the varied types of data that are recordable and analyzable; the accessibility and durability of these data, with potentials to be: a) immediately available for formative assessment or adaptive instructional recalibration, and b) persistent for the purposes of developing learner profiles and longitudinal analyses; and 4) data analytics, syntheses and presentations based on the particular characteristics of these data, for learner and teacher feedback, institutional accountability, educational software design, learning resource development, and educational research.

You can read more about how we believe big data may transform not only learning and assessment, but also educational research, in this open access article: <http://journals.sagepub.com/doi/abs/10.1177/2332858416641907>