IMPROVING STUDENTS' LEARNING OUTCOMES

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- A Ruminative Foreword, Prompted by this Title

John Cowan

An educational colleague of mine liked to quote the wise words of her grandmother, who often pointed out to her that: "If you don't know where you're going, any bus will do." The moral of that advice – educationally - is that learners are unlikely to make real progress towards achieving outcomes which they will value, if they do not have their intended outcomes in mind, while they are learning. Ever since Mager in the middle of last century stressed the importance of what he then called "learning objectives", the desirability of all concerned being clear about the desired outcomes of any learning activity should have been appreciated in education. And so the purpose and emphasis embodied in the editors' carefully chosen title for this anthology is pertinent, timely and potentially useful. For each of the four words in the title offers a pointed promise about what we readers should find in the pages and inputs which follow. In considering that challenge myself, though, I'm aware that I must write cautiously. For this is the first time I have been asked to tackle such an introduction. And I am mindful of the advice that a foreword should be like an item of high couture in a Parisian fashion show. It should cover the subject effectively, while being brief enough to provoke interest. I shall do my best in regard to both requirements.

   Let's begin immediately, then, with that first word – "Improving". Even as I draft this foreword, I am anticipating my next activity with my post-graduate students of Human Resources Management. They are charged, *inter alia,* to plan for their personal, professional and academic development. They must choose and specify worthwhile aims from outwith the declared curriculum; then they have to specify in SMART goals what they want to achieve; and next they should plan to bring about that development in a self-directed manner, accumulating, as they progress, data which they will use to monitor and evidence

their progress. None of that will be an easy task for them - or for me, as their facilitative tutor. And every year the task becomes more difficult. My students want to improve themselves by selecting and achieving worthwhile learning outcomes as their goals. As their tutor, I want to improve the end result for them, by facilitating self-directed development of the highest possible standard, helping them to be the best that they can be - without brain surgery or working much harder. But every year this does become more demanding.

In my admittedly long lifetime in academia, desirable learning outcomes in higher education have changed almost unrecognisably. The world into which I emerged as a graduate expected me to have stored in my memory, and to be able to recall and apply with understanding, much pertinent professional knowledge. Nowadays, that's neither necessary nor valued any more. Graduates, like today's school children, can all use search engines for recall, and can obtain from the internet clear explanations, at the time they need them, of that which they want to understand. And they can then, with little effort, employ commonly available software to apply basics, and much beyond basics as well. Today's graduate is expected, much more than was the case 50 years ago, to engage in sophisticated analysis and problem-solving, to think creatively, to make professional judgements objectively and systematically, and to have a high level of ability in regard to the interpersonal skills which were only developed serendipitously in the past. Such learning outcomes are nowadays relevant, valid and important – and ever more demanding, educationally, as each passing year calls for further sophistication in response to the relentless progress of technology. It is increasingly difficult for teachers or learners to plan programmes of development, and especially of self-development, to achieve such outcomes to the standards that we, and society, would wish. Yet improvement in our target demands is constantly expected of us, more and more so with every passing and changing year. It will be of great interest and usefulness to readers to learn what contributors to this volume have to offer us in terms of imaginatively effective pedagogies and wide-ranging embracing of possibilities, in response to this important double-barrelled challenge. For they and we must improve the outcomes we have in mind, and accommodate aspirations of learners and of the pedagogy which grow ever more demanding.

That, of course, then takes me on to the other aspect of the improving which teachers and institutions are expected to pursue – namely to having more success with more students, in terms of the learning outcomes which each cohort can hope to carry out into the world of em-

ployment. This interpretation of "improving" focuses my mind immediately on the changing circumstances within which I have to teach. Not only is the world expecting different and progressive outcomes; but that demand faces me, and you, I suspect, within a context where our nations seek to radically increase participation in higher education. The result of that growth in numbers is that our intake includes a higher proportion of applicants of lower ability, and so presents us with classes in which variation of ability is more and more striking. In my country, the added impact of internationalisation has in addition resulted in intake cohorts whose prior experience, expectations, priorities, attitudes and abilities, vary more markedly than we have ever before experienced. For serving teachers like me, to improve in this ever-changing context often means that we must first strive zealously simply to maintain standards in the face of increasing demands for improvement, and ever changing circumstances – and usually with lessening resources. Yet the world, and our paymasters, still expect us to show tangible improvement in our institutional outcomes.

There is a subtle challenge here, for those who aspire to improvement. It concerns standards. The shrewd English playwright, Alan Bennett, had one of his characters quiz an aged headmaster, in a play called *Forty Years On: "*Have you ever thought, Headmaster, that your standards might perhaps be a little out of date?" To which the headmaster replied "Of course they're out of date. That is what makes them standards." Consequently, for you and I who read this volume, part of our challenge is thus to push forward beyond the established and out-of-date standards of our world, and make and pursue our own new developing aims and standards. How will you and I do that in the immediate future? It's another important question, and we will both look to contributors in this volume to help us to answer it.

The second word in our title is "Students'". That's perhaps a fairly obvious inclusion. However I do sincerely hope that the editors and their contributors really mean "***students'*** learning outcomes". I often quote the simple story told by James Thurber. It was set in a primary school class where the pupils had been reading a book about penguins, after which each had had to write an essay on that subject. One small girl wrote a short, one-sentence, essay: "This book told me more about penguins than I wanted to know."

In over four decades of my involvement in higher education, it has often seemed to me that too often teaching activity, and assumed learning activity, focus on what the *teachers* have decided should be the learning outcomes, rather than as what the learners want to know, *and*

know that they need to know. Like the little girl, students may well be introduced to subject matter whose point eludes them, or which does not respond to their immediate interests and concerns. I recall evaluating a remedial first year university class in mathematics, where open-ended feedback had been requested from the learners after a carefully planned workshop activity. One student wrote with feeling: "Now I (still) know *how* to integrate by parts; but I don't know *when* to integrate that way." *His* desired outcome, and his teachers' priorities, had unfortunately not quite coincided.

In discussing student-determined learning outcomes, I find myself quoting my experience in a recent module where my students set out to develop, through self-directed learning, the abilities they would need for subsequent undergraduate project work in social studies. They carried out self-appraisals, identified their priorities, and made plans accordingly. Most of their desired outcomes were predictable, although they might subsequently feature in individual plans to a greater or lesser extent. One woman, however, stressed an aim which stood out for me as somewhat special. She had reflected in her learning log that she had a female brain, with a greater number of connections between the two hemispheres, which gave her a greater potential than have males for multi-tasking. However she was aware that the effectiveness of that multi-tasking needed to be enhanced. "It's like my juggling. Sometimes I juggle too many things at once, and drop some of them. Sometimes I don't juggle with sufficient items to be effective and efficient. I want to improve my multi-tasking." She put that item on her individual agenda of abilities to be developed. She determined to work purposefully towards that learning outcome (amongst others), and in due course she demonstrated to her own satisfaction (and to mine) that she had improved her mastery of this particular ability – to good effect. I hope that example, which I have found rather inspiring, illustrates why I value putting considerable stress on the outcomes of learning programmes being, or at least including, the students' choices. I trust that the contributors to this volume, and readers, will feel the same way, and will focus our attention accordingly.

Next in our title we come to "Learning". That immediately prompts me to wonder if we teachers can usually be aware of what learning, and impact, our activities have had on our learners' development. For I am not sure how well we as a profession identify and judge and respond to the impacts of our "teaching" in terms of the students' learning outcomes which promise to endure and to have potential. At present, much depends on opinion; educational judgments and evaluations

are still distinctly subjective. Students may tell us, sincerely, how well they *think* they are learning, or have learnt. These claims can be tested in respect of their retention of simple, factual inputs. Students can be invited to opine in focus groups about deeper learning. But we have few examples in practical terms of evaluative approaches which help us determine, in terms of hard data, the nature of students' immediate learning experiences, or of their immediate and retained learning and development, and the associated affective outcomes, especially following discussions, workshops and seminars.

Over 30 years ago, I was experimenting with a new (at the time) technology-based approach to student learning. When my students emerged from the carrels where they had been studying, I asked their opinions. "That's a great development!" they enthused. "Give us more of that; we learn so much more effectively." I asked if they would mind taking a 90/90 test of their simple recall of some of the simpler content of the sequences. Readily they agreed to assist, expecting that nine out of ten of them would score at least nine correct answers out of the ten questions posed. A few minutes later they would return the answer sheets, normally with crestfallen faces. "I know I should have been able to answer; the questions were fair and straightforward; the answers were in the material, and we used it only half an hour ago. But I've forgotten many of them already." Sincere *opinions* about the enduring or even immediate learning which occurs within learning activities may not be confirmed by hard data. Professionally, we need to move on to purposeful and sound action-researching of the learning and achieved personal and professional development which our programmes engender.

That point, of course in turn takes me smoothly on to the last word in our title, which is "Outcomes", and to teachers' and students' identification of them, together with their judgement of their value. An American cynic once commented that the making of educational judgements by teachers and students reminded him of how they used to weigh hogs at markets in Texas. They set up a big beam, and tied the hog on one end. Then they found a boulder to tie on the other end, and shifted the beam until the boulder and the hog balanced. They measured the position of the boulder, to include that accordingly in their equations. They then calculated the weight of the hog - having guessed the weight of the boulder. Many of today's educational evaluations of the enduring outcomes of learning still seem to me to be a deceptive mixture of seemingly precise measurements, sophisticated calculations, and great reliance on the opinions at the heart of it all,

which are almost guesswork. Let's hope our contributors can help us to improve the ways in which we determine the value for our students of the long term outcomes of our innovations.

These, then, have been the thoughts on which that title prompted me to ruminate, in a rambling manner. Many years ago, in their published profiles of their teachers, my students described me as "Famous for his digressions". Mindful of that valid judgement, I can see as I re-read that I should return from my ramblings to my remit, and to an item on which I should have expanded before I moved on to these four title words. I should of course have dwelt on the venerable grandmother's advice, about knowing where we are going before we set out, and as we journey. For that implies that we should *all* know where we are going. So, before I finish, I should remind us all that, before we give consideration to this business of improvements in students' learning outcomes, we should re-assert our commitment to declaring and using transparent, well-articulated intended learning outcomes of whose meaning we have all confirmed that there is a shared understanding, as well as acceptance.

Many years ago I led a Sunday School in my local church. One of the teachers was an earnest young girl, who told her class one day that they were going to study the prophets. Wishing, with a sound pedagogical (yet problematically oral) approach, to confirm that this outcome was understood, she asked if anyone could tell her what a prophet was. One small boy eagerly volunteered that a profit (*sic*) was when you bought something and sold it for more than you had paid for it. The teacher smiled kindly, valued the answer because it related to her employment in a bank, and amplified the intended outcome. "Yes, but today, we're going to be studying *Biblical* prophets. What's a Biblical prophet?*"* The same small boy responded with equal enthusiasm and conviction: "It's when you buy a *Bible* and sell it for more than you paid for it." The point I want to make here about our title and purpose, then, is that it is always important to ensure that all concerned know what are the intended outcomes and desired standards, and should attach the same meaning to their descriptions of them.

In my work as an external examiner in a variety of settings, I check students' and teachers impressions of the desirable qualities, for example, of sound project work. I usually find marked discrepancies of which the teachers are unaware, and to which both sides can usefully give urgent attention, in both their interests. I hope our writers can help us with this matter of ensuring a shared and commonly understood understanding of the desired outcomes of student learning.

But I feel another digression coming on, I'm afraid. I close my remarks with the apocryphal tale of the young American backwoodsman who won a magazine competition which took him to New York for a wonderful week's holiday. He wrote each night to his family, describing the immensity and bustling vigour of the great city, but especially the wonder of the luxurious five-star accommodation in which he was located. He described the carpets into which his feet sunk, the range of sumptuous leather armchairs and settees in his enormous sitting room, the generous mini-bar, the massive bed in his bedroom – but especially the enormous bathroom. He described that it seemed to have two toilets, every other facility he could wish and many of which he had never imagined. And the bath! It was enormous, had gold taps, and all sorts of other refinements. He declared enthusiastically: "I just can't wait until it's bath night on Saturday!"

Like that young man, I just cannot wait… In *my* case, and in this context, I just cannot wait until I can read how the contributors to this volume, expertly steered by the editors, will take you and me forward to engage with the rewarding challenges promised in these four words of that demanding title, and the wise words of an old grandmother.

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CHAPTER 1

Learning Outcomes – Politics, Religion or Improvement?

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Setting

In this anthology we focus on ways in which students' learning outcomes can be improved. Using a downright popular phrase we are particularly interested in how to generate as much activity as possible between the ears of our students. We aim to fascinate both students and teachers to engage in experiments that will help students learn as much as possible during their years of study.

In the sixteen chapters that follow we present a range of empirical cases where the curriculum has been developed in such ways that its mix of Learning, Teaching, and Assessment-methods (LTA-methods) has improved students' learning outcomes. The cases offer valuable insights into everyday practices of students, teachers, and administrators, and put forward a wide range of theoretical arguments for why and how students' learning outcomes (SLOs) have been improved.

This book sets out to deliver clarification, insight, and inspiration. To us as editors (and to the group of international researchers who have written the chapters) there is no doubt that an increased focus on students' learning outcomes, and an alignment of LTA-methods in curricula in order to improve students' learning outcomes, are an important and valuable part of quality enhancement of Higher Education (HE). We dare to go so far as to state that a shift in paradigm from supply-driven to outcome-based HE is a prerequisite for the survival of HE institutions (HEIs) as we know them today.

Before we turn to the empirical cases and their underlying theoretical philosophies, we shall dig into some of the overall aspects of the concept of learning outcomes in order to position the book in the theoretical landscape. We shall also address some of the more critical aspects of learning outcomes. First we look at some possible explana-