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'EVIDENCE-BASED TEACHING' - THE TERM IS EVERYWHERE AT THE MOMENT

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Misty Adoniou explains why evidence based learning is not a new phenomenon. It has always been a part of a teacher's pedagogy and is used in every classroom every day . . .

The Federal government committed $34.6 million in the 2024 Budget '*to make evidence-based curriculum and student wellbeing support and professional development materials*. In July NSW launched a '*revamped*' curriculum that is '*clear, evidence-based and carefully sequenced'*. (NSW Government, 2024)

Who can argue? We all want our children taught by methods that have evidence behind them. Yet these political pronouncements, and the accompanying media frenzy, seem to imply that up until now this has not been the case.

But of course, our children have always been taught through evidence-based methods. All teacher education degrees are evidence-based. Departments of Education have always used evidence to develop curricula and provide professional learning for teachers.

Teacher Education has been an academic discipline for over a century. That is about 50 years longer than Macroeconomics, 60 years longer than Cognitive Psychology and 75 years longer than Media Studies.

To be a member of the 'academy', the field of Teacher Education fulfils the requirements of being a science. This means conducting studies under defined conditions to ensure validity, reliability and accuracy, and submitting those studies for peer review to have them questioned, clarified, rejected or accepted. This is how knowledge is built in the sciences – including in Teacher Education which has about 130 years of this scientific knowledge building behind it.

The NSW and Federal governments have both declared initiatives to make curricula 'evidence-based'. Yet, the national Australian Curriculum we have today, and which is taught in some form or other in every Australian school, including NSW, drew on a huge evidence base from domestic and international studies, and several years of research consultations with academics and educators before it was finally released in 2011. It has undergone many reviews since then, making changes in response to new evidence from research studies in curriculum, teaching and learning. The latest review was in 2021, and we are now at Version 9 of our national curriculum. We have always had evidence-based curricula – it has always been the task of the various federal, state and territory curriculum authorities to ensure this.

Victoria's Education Minister announced in June 2024 that his Department will mandate '*evidence-based teaching and learning*' from 2025.

Victoria has always provided evidence-based teaching and learning guidance for its teachers, most recently in 2018 with its ten High Impact Teaching Strategies (HITS) highlighting clear goals, structured lessons and explicit teaching as its top 3 strategies. These were developed from researcher John Hattie's evidence base gathered in his synthesis of 800 meta-analyses of research studies on school achievement.

So if we have always used evidence-based practices and curricula in schools, what are these most recent pronouncements about?

Why give this public impression that our teacher education faculties, education departments, school leaders, and teachers have been operating for decades on a whim, rather than on the evidence?

Why? Because '*Evidence-based teaching*' is actually being used as shorthand for 'the approach I favour' or 'the approach that worked for someone I know', or even 'the approach I have a vested interest in'.

And too many of those advocating for these 'evidence-based practices' either misunderstand, or deliberately misrepresent what evidence is.

This is what evidence is NOT.

Evidence is NOT proof.

Evidence is NOT static or absolute.

Evidence is NOT neutral.

Evidence IS contextual.

Evidence IS open to interpretation.

Evidence is not neutral. Studies are designed to gather evidence within a theoretical paradigm. Both the goals and the methods of the study are informed by a theory. If the informing theory of learning is behaviourist, where learning is deemed cognitive and moderated by repetition and reward, the research study will look for different evidence than a study situated within a social constructivist theory, where learning is deemed social and moderated by interactions with expert others in the pursuit of meaning.

Evidence is contextual. Each research study context has multiple variables: historical context, socio-economic context, cultural context, situational context, the number, age, gender, social and economic status, the cognitive and emotional wellbeing of the participants. Evidence gathered in one context is not proof similar evidence will be generated in another context.

Indeed the contextual variability of classrooms is a nightmare for clinical scientists, whose methods are highly dependent upon controlling variables. It is impossible to recreate classroom conditions in a lab. And even when studies are conducted in classrooms, it is impossible to control the variables and replicate the conditions from one classroom to another.

However we have always known this challenge. Researchers reviewing data sets or conducting clinical experiments are not the only people gathering evidence to inform teaching practice. Teachers gather evidence every hour, every day, in every classroom in Australia. Teachers are scientists.

It is why teacher education institutions train teachers in the scientific method. Over their 4 year degree, primary school teachers are taught how to conduct their own studies, gathering evidence from their own classrooms to build robust evidence-based practices that work in their contexts for their students. They plan and record these studies in a document called a lesson plan - the equivalent of a lab report - for every lesson they conduct.

The lesson plan starts with **a learning goal** – or hypothesis – which describes the learning that will occur in the lesson. These goals come directly from the government mandated evidence-based curricula.

The plan then states **how achievement against the goal will be measured** e.g. through observation, collection of work samples, interviews, testing etc

Materials and resources required to achieve the learning goal are listed.

Conditions for the learning are described with **time allocations, and organisational structures** for the lesson. E.g. in pairs, whole class, self-assigned groups, teacher-assigned groups and how much time will be allocated to each task

The plan describes how the teaching will **deal with known variables**. E.g. audio support for learning impaired student, supplemental written and visual instructions on task cards for student with autism etc

A **method** is given – a sequential and detailed account of what will occur during the lesson to achieve the learning goal. The method is shaped by the informing theory for the lesson.

An **assessment** is conducted of the students' achievements against the learning goal and **the results recorded.**

Finally an **evaluation** occurs – a discussion of the results. Was the learning goal achieved - by whom? Why did it work or not work? Were there limitations? What adjustments need to be made for the next lesson?

Teachers conduct this scientific gathering of evidence with every planned lesson they teach, as many as 6 per day. Teachers spend all day every day building evidence-based teaching practices. Yet their voices, and their findings are strangely absent from these most recent and most earnest evidence-based directives from government.

Every time an educator hears the term 'evidence-based' practice it is incumbent upon the educational scientist within each of us to ask:

Evidence of what?

Why was it generated – what question were they seeking to answer?

How was the evidence gathered – what was the informing theory?

Where was it generated?

When was it generated?

Who were the study participants?

This allows us to firstly decide whether it is a practice we need to trial in our own context – is it solving a problem that we have, and secondly understand its limitations due to contextual differences and the possible need to make adjustments to its implementation.

For example, let's say the proposed practice or program has evidence it improves decoding skills in 6 year old monolingual urban students with language delays.

A target school's testing shows their 6 year olds have good decoding skills but their 10 year olds have poor comprehension skills. Thus there would be no reason for the school to trial the proposed evidence-based practice as it does not address their issue.

Another target school in a low SES regional area has 6 year old multilingual students with poor decoding skills. The school may trial the practice but make adjustments for the fact that the evidence base is for a student cohort in a different location and with different language needs.

If the practice is shown to also be effective for their cohort they should report the results to their peers so the entire education community can learn from their study. Equally, if it is found to be ineffective for their cohort, they should drop the trial, and report the results. They should not continue blindly with an evidence-based practice which is ineffective in their context or irrelevant to their needs simply because it has been 'mandated'.

This is actually what evidence-based practice means. Trialling evidence-based research in your own teaching context, seeing whether it works and being agile and informed enough to adjust the practice, or reject it, when it isn't working.

We can only hope that our Education Ministers have understood this. Their words and actions so far suggest they haven't.

REFERENCES

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ABOUT THE AUTHOR

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She was a lead writer for the national English as an Additional Language Teachers Resource which accompanies the Australian Curriculum. She was a contributing writer for ACARA's Language Learning Progressions. She also wrote the Federal government's Orientation curriculum for newly arrived adult refugees.

She believes in the advocacy power of professional voices and the importance of professional associations in corralling that strength. She has served as the President of two national teachers associations – TESOL Greece, and the Australian Council of TESOL Associations. She is currently on the board of Directors of TESOL International, an affiliation of 105 teachers associations around the globe.

She currently works directly with schools, overseas and around Australia, leading professional learning in the teaching of spelling, grammar and writing.